Preface

This report is a joint product of its authors. We had several discussions and out of these emerged a shared interpretation of the essential features of the Nordic model and of the challenges it is facing. The group is similarly in agreement on the need for reform and on the main directions that reform should take.

The group is for me a “dream team”; all those who were approached joined the team. Seppo Honkapohja has acted as chairman. The participants are eminent economists and thoroughly familiar with the policy issues confronting the Nordic countries. This report should be of considerable interest to all those who want to have a good understanding of the Nordic model.

Pasi Sorjonen and other staff from ET LA have assisted the group in its work. The efficiency and speed of the editing by Kimmo Aaltonen and Laila Riekkinen has been amazing. We are grateful to a number of colleagues for their help and advice.

Financial support of the TT-foundation is gratefully acknowledged.

Helsinki 4 December 2007

Sixten Korkman
**THE AUTHORS**

**Torben M. Andersen** is Professor of Economics at the School of Economics and Management, Aarhus University in Denmark and affiliated to the research centres CEPR (London), CESifo (Munich) and IZA (Bonn). His research interests include the economics of the welfare state, labour economics and macroeconomic policy. He has published widely on these issues in international recognized journals. Torben M. Andersen has been involved in policy advice in Denmark and a number of other countries. He has among other things been chairman of the Danish Economic Council and the Danish Welfare Commission. Currently he is member of the Fiscal Board in Sweden.

**Bengt Holmström** is the Paul A. Samuelson Professor of Economics in the Department of Economics at MIT. He has a joint appointment with MIT’s Sloan School of Management. He has worked on the theory of the firm, particularly in the areas of contracting and incentives. His recent research has focused on corporate governance, as well corporate liquidity management and the demand and supply of liquidity in financial markets. Holmström is a fellow of the American Academy of Arts and Sciences, the Econometric Society, the European Economic Association and the European Corporate Governance Institute. He is a Research Associate of the National Bureau of Economic Research (NBER) and a member of the executive committee of the Center for Economic Policy Research (CEPR). He has served on the board of Kuusakoski Oy (recycling) since 1989 and Nokia Oyj (mobile telecom) since 1999.

**Seppo Honkapohja** (D.Soc.Sc., University of Helsinki, 1979) has been professor of economics at Turku School of Economics and Business Administration in 1987–1991 and at the University of Helsinki in 1992–2003, and is currently professor of international macroeconomics at the University of Cambridge. He has also served as Academy Professor in the Academy of Finland and has held visiting academic appointments in the US and other countries. In the beginning of 2008 he will become Member of the Board of Governors of the Bank of Finland. He is a member of Academia Europaea, of the Finnish Academy of Science and Letters, a Fellow of the Econometric Society and a Fellow of the European Economic Association. Honkapohja is an active participant in
economic policy discussions. In 1997 he was Member of Finnish Expert Commission on EMU, and in 2002–2007 he served in the European Economic Advisory Group at CESifo.


**Hans Tson Söderström** was from 1970 until 1984 Research Fellow, Senior Fellow and finally Deputy Director at the Institute for International Economic Studies at Stockholm University. Between 1985 and 2002 he served as President and CEO of SNS – the Swedish Center for Business and Policy Studies. Since 1992 Hans Tson Söderström has served part time as Adjunct Professor of macroeconomic analysis and policy in the Department of Economics at the Stockholm School of Economics (SSE). In 2004 he returned full time to SSE to become President and CEO of the school’s executive education branch. Professor Söderström’s main area of research is macroeconomic policies in small open economies. He has produced a number of scientific papers and textbooks in the area and has also served widely as policy advisor. Between 1985 and 1995 he was chairman of the SNS Economic Policy Group with annual reports on Swedish economic policy.

**Juhana Vartiainen**, pol.dr., leads the Research Division at the National Institute for Economic Research (Konjunkturinstitutet), Stockholm and is a part time associate professor (docent) at Åbo Akademi, Finland. In 2003–2005 he was the director and executive officer of the Trade Union Foundation for Economic Research, Stockholm. Juhana Vartiainen has been engaged in macroeconomic research, including the history of macroeconomic policy in Finland and Sweden, as well as microeconometric studies of the labour market, the gender wage gap and the economics of collective wage agreements in the Nordic countries.
CONTENTS

PREFACE
THE AUTHORS

1 INTRODUCTION AND SUMMARY  11
  1.1 A nordic model exists 13
  1.2 The nordic model has performed well in the past 15
  1.3 The nordic model has been conducive to good economic performance 16
  1.4 Major challenges to the nordic model give rise to an urgent need for reform 19
  1.5 Many proposed “solutions” are unworkable 21
  1.6 An effective wage bargaining process is essential 24
  1.7 Privatization and/or outsourcing of public services can contribute to efficient provision 25
  1.8 Our guidelines for reform 26

2 THE NORDIC MODEL: MYTH OR REALITY? 31
  2.1 Free trade and the market mechanism 32
  2.2 Collective mechanisms for risk sharing 37
  Endnotes 44

3 THE PERFORMANCE OF THE NORDIC MODEL 45
  3.1 Employment and productivity levels 45
  3.2 Growth and technology 47
  3.3 Social equality 54
    Annex: Growth accounting 58
    Endnotes 61

4 DEMOGRAPHICS: FROM TAIL-WIND TO HEAD-WIND TO 63
  HEAD-WIND
  4.1 The welfare state as a social contract 64
  4.2 Ageing – the trend is turning 69
  4.3 Ageing puts the public sector under financial pressure 71
  4.4 Fighting a trend 73
8.5 The future of public services – leveraging the private sector 145
8.6 Conclusion 154
Endnotes 156

9 GUIDELINES FOR REFORM 157
References 162
The Nordic model is widely regarded as a benchmark. A number of comparative studies of economic and social performance have ranked the Nordics high. A common finding of cross-country comparisons is that the Nordics succeed better than other countries in combining economic efficiency and growth with a peaceful labour market, a fair distribution of income and social cohesion. The model is pointed to as a source of inspiration for other people in their search for a better social and economic system.

On the other hand, many observers around the world are amazed that “the bumble-bee can fly” – that the Nordic economies can prosper and grow in spite of the presumably weak economic incentives associated with high tax wedges, a generous social security system and an egalitarian distribution of income. Critics have been looking for inner contradictions in the model and they have questioned its sustainability. Some argue that the economic performance of the Nordic countries is simply a result of exceptional and temporary advantages, bound to disappear over time.

This report deals with the Nordic model, the reasons why it has worked in the past, and the challenges it is being subjected to in the future. Present economic and social trends, including globalization and demographic change, pose significant challenges to the model as we know it. The model will remain viable and successful only if the challenges and the need for reform are understood – and if action is taken.
Globalization is primarily an opportunity and not a threat. It has been the very basis of the growth in productivity and living standards that the Nordics have achieved. However, the continued trend of globalization will put the model under pressure. The emerging economic giants in Asia and Latin America will force us to restructure our economies at a rapid pace; relocation of production and job losses need to be compensated for through innovations and growth in new activities. Simultaneously, globalization may undermine the financial viability of the welfare state by increasing international factor mobility and tax competition between nations as well as by opening up the possibility of “social tourism” for eligible groups.

Demographic change – in the form of an ageing population – increases the size of the passive population (retirees), while tending to decrease the size of the active population (workers). The result is a dramatic rise in the dependency ratio and a strong pressure towards increased social spending and higher tax rates. The combination of ageing populations and high ambitions for welfare services will strain public finances, even more so if globalization increases the mobility of jobs and labour. The sustainability of present tax-transfer systems and public systems of care for the elderly are being seriously put into question.

In responding to these challenges we regard a number of proposed “solutions” as basically non-workable. For instance, the financial dilemma of the welfare state cannot be resolved through more rapid economic growth, higher taxes, increased fertility or more immigration.

On the other hand, we believe it is essential to preserve one central feature of the Nordic Model. The Nordics have been embracing both globalization and the welfare state, and we argue that the security offered by collective mechanisms for sharing risks has been instrumental in enhancing a favourable attitude to globalization and competition. This key characteristic of the model must be preserved – in order to maintain an economic and social climate which is conducive to future welfare and growth. Collective risk sharing should continue to offer a safety net which helps workers and their families to cope with risks and to adapt to new requirements in times of change.
In addition, we emphasize that a high rate of labour force participation is an indispensable ingredient of the model. There must be sufficient incentives – in the form of financial rewards and/or workfare elements – to participate in the labour force and to work. Lengthening working careers must go hand in hand with increasing longevity. The “social contract”, including the public pension system, should not be based on the assumption that the tax burden can be passed on to future generations in the form of rising tax rates.

There is also a need to define the core tasks of the welfare state and to clarify the scope of the services that citizens are entitled to and should be able to expect. Higher productivity in the provision of welfare services is imperative and can be enhanced by, inter alia, privatization and outsourcing of public services, though only in cases where difficult and important issues of governance can be dealt with satisfactorily.

Finally, investment in human capital should not be the victim of increasingly tight budget constraints; what is good for the young is good for the future of society.

Our findings and conclusions are summarized in the sections that follow. The reasoning behind them is then developed in the ensuing chapters.

1.1 A NORDIC MODEL EXISTS

There is indeed a social and economic system that can usefully be referred to as the Nordic model. Obviously, there are important differences between the economies and policies of the Nordic countries. (The Nordic group is in our case limited to Finland, Denmark and Sweden, as Norway and Iceland would deserve special treatment due to their non-membership of the EU and their high reliance on oil and fishing respectively.) Yet, it is the similarities that are more striking, some of the principal features being the following:

- a comprehensive welfare state with an emphasis on transfers to households and publicly provided social serv-

The incentives and the balance between entitlements and obligations must support a high rate of labour force participation.
ices financed by taxes, which are high notably for wage income and consumption;

• a lot of public and/or private spending on investment in human capital, including child care and education as well as research and development (R&D); and

• a set of labour market institutions that include strong labour unions and employer associations, significant elements of wage coordination, relatively generous unemployment benefits and a prominent role for active labour market policies.

To the extent that these features can be measured, the similarities of the Nordics are supported by statistical data. The Nordic countries tend to create a cluster of their own along many dimensions. Other European countries (notably the Netherlands and Austria) are often similar in certain respects, but in no important respect do we see an outlier among the Nordics.

While the similarities are important, they are not in themselves the essence of the Nordic model; its crucial characteristics are more difficult to capture, they relate to intangible and systemic features. We believe that the basis of the model is a combination of collective risk sharing and openness to globalization. There is a mutually supportive interaction between these two elements: collective risk sharing helps make globalization acceptable to citizens, by facilitating adjustments that allow the economy to benefit from changing markets and to raise productivity and incomes. While having large public sectors, the Nordics are also embracing the market economy and actions to foster competition. Underpinning this virtuous interaction of security and flexibility is the widespread feeling of trust – among citizens and in public institutions – and a sense of fairness related to the egalitarian ambitions of the welfare state (education, social policy).
1.2 The Nordic Model Has Performed Well in the Past

The Nordic countries have, according to many indicators, succeeded relatively well in fulfilling their social ambitions. Recently, this has been combined with a satisfactory economic performance in terms of employment and productivity levels as well as growth of GDP per capita. Also, the macroeconomic balance is good and public finances are strong. There is indeed a Nordic success story in the sense of a favourable combination of economic efficiency and social equality.

True, the Nordics went through a period of low productivity growth in the 1970s (like most other OECD countries) as well as a major financial and macroeconomic crisis with very high unemployment rates and large fiscal imbalances in the early 1990s (somewhat earlier and less dramatically in the case of Denmark). But even so, the Nordics have more or less managed to keep up with the US in terms of PPP-adjusted GDP over the last 25–30 years, which is more than can be said of most other EU15 countries. The long-term performance is mainly recorded as a high rate of total factor productivity growth. This indicates that technical progress, notably in the area of information and communication technology (IT), has played an important role in growth. More importantly, it also shows that the Nordics – contrary to popular belief – demonstrate a high degree of economic flexibility and capacity of structural change. The macroeconomic crises have helped the process by inducing growth-enhancing changes in structural policies (and, for a while, through the improvements of competitiveness caused by large depreciations in the early 1990s).

The Nordic countries are now at the forefront with respect to technological development and IT growth. Their financial markets are open to the world, the Nordics have developed a reasonably well-functioning system of corporate governance, and in the corporate sphere they have produced a disproportionate number of world leaders. The Danish economy is ranked by the World Bank as number 5 in the world with respect to the ease of doing business, with Finland and Sweden coming in at number 13 and...
14, respectively, out of a total of 173 countries. In terms of ease of “Trading across borders”, the three Nordics are among the six top nations in the world (with Singapore, Hong Kong and Norway also in this group). The Nordics are well ahead of the average for the EU15 with respect to macroeconomic stability, in particular fiscal consolidation and the net foreign asset position, but also in combining price stability with a relatively low unemployment rate. In the “World Competitiveness” rankings done by the World Economic Forum the three Nordics are among the top six nations out of 131 for 2007–2008. In a recent ranking of “innovation ability” (“Innovationsfähigkeit”) of leading industrial nations in 2007 by the German Institute for Economic Research, Sweden, Finland and Denmark come among the top five out of 17 nations. One should be careful in interpreting such rankings, but based on the abundance of similar evidence it is hard to argue that the Nordic model is not consistent with a good business climate.

1.3 THE NORDIC MODEL HAS BEEN CONDUCIVE TO GOOD ECONOMIC PERFORMANCE

Professional economists have often been puzzled by the relatively good economic performance of the Nordic model, given its high taxes and its generous social protection systems as well as the role of strong labour unions and wage coordination. Obviously, there must be losses of economic efficiency caused by some of the characteristics of the Nordic model, and many studies have been devoted to the analysis of the economic costs of a large welfare state. But, equally obviously, there are other factors which have made up for such disadvantages.

The “other factors” can for the purpose of exposition be divided into three categories. The first category includes factors that are entirely exogenous to the economic system, such as geographic location, climate, natural resources, or religion. The second category comprises institutional factors that are related to the economic system, such as political freedom and absence of corruption, well-defined property rights and a reliable judicial system,
or good health and educational standards. The third category, finally, are factors that are a direct result of economic policies, such as openness to trade and factor mobility, a tax system favourable to labour supply, accumulation and entrepreneurship, and a good infrastructure for transport and communication.

While the Nordic success story could be partly explained by factors belonging to the first and notably the second category, we would for the purpose of this report like to focus on the final category, i.e. growth-enhancing economic policies. For more than a century the Nordics have been free-trading nations with a low level of protection in commodity trade (excluding agricultural products), leading to continuous structural change and a high degree of specialization in areas of comparative advantage. The Nordics have even longer been relatively open to migration, not least immigration of specialists and entrepreneurs with specific technical or commercial skills. A more recent development is that free enterprise on the whole prevails and that state intervention in the business sector is limited. The labour unions are politically influential but have not gone against these policies, nor have they resisted the introduction of new techniques or off-shoring of activities which have led to productivity improvements and displacement of labour.

One way of looking at the “bumble bee” feature of the Nordic model is by pointing to some significant characteristics of public spending. Much of it is on items like child care and education, the infrastructure, research and active labour market policies. Such spending may offset part of the negative effects of high taxes. Also, there is often a link between entitlements and contributions in transfer systems (notably pensions), which supports participation in the labour force. Furthermore, the importance of a high level of trust and absence of corruption must not be underrated – these phenomena help maintain the public backing and therefore the viability of a large public sector.

As already noted above, we argue that some of the key elements of the Nordic model have been conducive to the implementation and political acceptance of growth-enhancing policies. The argument is this: Economic growth is only to a limited extent achieved via pure accumulation of factors of production. More important
are the effects of technical change and reallocation of factors in response to changes in the international pattern of specialization. International trade and technical progress can lead to increased welfare only by way of structural change, a process with winners and losers. New competition has the consequence that some workplaces are closed down, jobs are lost and labour is displaced. The economic argument in favour of free trade and open markets is not that there are no losers, only that the winners have so much to gain that they can – in principle – compensate the losers. Such compensation, however, is not always achieved in practice. Thus, potential losers in many countries have used political and union power to create barriers to new competition by way of tight labour market regulation with strict job protection, tariff and non-tariff protectionism, government subsidies or public monopolies.

The Nordic model can be regarded as a way of generating political support for growth-enhancing technical change, free trade and open markets by creating a number of systems through which the winners from structural transformation at least to some extent compensate the losers. Solidaristic wage setting, active labour market policies, redistribution of income via tax-transfer schemes, comprehensive and generous unemployment insurance schemes and other elements of social protection can all be regarded as ingredients in such compensation mechanisms. This is not to say that all parts of such policies can be motivated by compensation arguments, or that existing schemes are particularly efficient in compensating the losers at the expense of the winners. In particular, a lot of public transfers amounts to redistribution of resources over the lifetime of a given individual rather than redistribution between different individuals. Nevertheless, we believe that social and labour market policies have been important in mobilizing political support in the Nordic countries for openness to new technology in production, free international trade and competition in domestic markets.
1.4 Major challenges to the Nordic model give rise to an urgent need for reform

Functional as it may have been in the past, we believe that the Nordic model today is subject to a number of challenges that will put it under serious pressure and call for fundamental reform in order to make it sustainable.

The root of the challenges is inherent in the basic set-up of the Nordic welfare state, which is based on tax-financed public provision of a large number of social services: child care, basic and advanced education, hospital care and health services, and care for the elderly. This is an important aspect of the Nordic model, in that it makes the access to such basic welfare services independent of income and employment status. But it is also a problematic feature, which may in the long run lead to an impasse in public finances. This is so for two reasons.

First, demand for (some) welfare services tends to increase faster than income (a phenomenon known by economists as “Wagner’s law”). Second, by their very nature, productivity in the production of welfare services tends to increase at a lower rate, if at all, than in the production of goods (or other services). Assuming equal wage developments across sectors, unit costs must then increase faster in the production of welfare services than in the economy as a whole (a phenomenon known by economists as “Baumol’s law”).

The two phenomena taken together imply a tendency for total spending on welfare services to rise faster than GDP over time. As long as the production of these services remains in the public domain, or as long as they are tax-financed, the tax burden must also exhibit a tendency to rise continuously with GDP. This is a problem of the welfare state that we have been living with for decades now. However, starting from an already high tax burden, the efficiency cost of further increases in tax wedges will at some stage rise steeply, and high taxes will eventually cause serious harm to employment and growth. It seems to us that we may be close to a critical point where the deadweight losses due to high tax wedges...
– and, particularly, their effect on labour force participation rates – start to bite seriously. This is particularly so in view of some of the consequences of globalization and demographic change.

Globalization is in general beneficial to economic growth as it provides an opportunity to increase the returns to factors of production via international exchange of goods and services and/or via international factor mobility. Nevertheless, increasing international mobility of labour also poses, if it continues unabated for long, a threat to the welfare state and the Nordic model. The entitlements to education and retirement as well as to care or benefits in the case of sickness, disability and unemployment belong to all citizens as individuals in this model, while the cost of these entitlements are born collectively and shared by all via the tax system.

With higher mobility of labour it becomes increasingly possible to benefit from the entitlements without sharing the cost (paying the taxes). There are many examples. Graduates from domestic tax-financed universities increasingly make their careers (and pay their taxes) abroad. Citizens who have spent most of their working lives (and paid their taxes) abroad, return to their home country after retirement to collect the benefits of free (or cheap) hospital care and care for the elderly. Unemployment rates and the frequency of disability pensions tend to be higher for certain immigrant groups than for domestic citizens. With increasing claims on entitlements due to “social tourism” and eroding tax bases due to factor mobility and tax competition between nations, the long-run sustainability of the Nordic model could be in serious jeopardy.

The most serious challenge to the Nordic model, however, is caused by the changing demographics, given the extensive role of the public sector in providing age-dependent social services and transfers. The age composition of the population will in most European countries change rather dramatically in coming decades. The shift is driven by two factors: a temporary “baby boom effect” as the large cohorts of the 1940s and 1950s reach retirement age, and a permanent effect caused by a continued increase in life expectancy. As a consequence, the working age population in Finland will decline from 66.5 per cent of the total today to 57.5 per cent by 2040. The share of those over 65 will increase from 16 to 26 per cent of the population, and the share of very old (above 85) will
increase from just below 2 to over 6 per cent over the same time period. Figures are broadly similar (though somewhat less alarming) for Denmark and Sweden. Accordingly, dependency ratios will start increasing dramatically from around 2010.

Obviously, the balance between those contributing to and those benefiting from the welfare state is shifting to such an extent that these demographic trends are putting the financial sustainability of the system in danger. In the absence of corrective measures Finland’s general government budget surplus will – according to calculations made in the Ministry of Finance – turn into a growing deficit (and public debt could amount to 120 per cent of GDP by 2050). The projection (which is no forecast) brings home the message that public finances are unsustainable in the long run when assessed in the light of current spending programmes and tax rates. Somewhat paradoxically, the general government finances are presently recorded as being in a large surplus, yet are deemed to be unsustainable in the long run unless significant action (corresponding to at least 1–2 per cent of GDP) is undertaken to improve the budget on a permanent basis.

1.5 MANY PROPOSED “SOLUTIONS” ARE UNWORKABLE

In public discussion there have been a number of suggestions as to how these challenges can be handled. Unfortunately, many of those suggestions turn out to be non-workable on closer inspection. We will deal here with some of these not-so-helpful reform proposals and explain why they do not work.

Economic growth. One of the most common proposals for solving the fiscal sustainability problem of the Nordic model is to undertake measures to raise the overall rate of GDP growth. The suggestion appeals to common sense: by “baking a bigger pie” we could get enough tax revenues and other resources to handle the increasing demands on the welfare state. Yet a little reflection reveals that economic growth per se does not solve the problem, and might even aggravate it. It should be emphasized that we are
not contesting economic growth as the key to higher living standards in the future. But however desirable growth is, it is unlikely to resolve the financial dilemma of the welfare state that we see looming in coming decades.

Growth of GDP is mainly achieved via increased productivity in the production of goods, while productivity change in the provision of many services is lagging behind. Nevertheless, higher private sector productivity will raise real wages not only in the private sector but in the whole economy, including in the public sector (as a consequence of market forces and/or wage coordination by unions). Though growth increases tax revenues, it also raises the public sector wage bill. In addition, political pressure will normally prevent public pensions and other transfer payments from falling permanently behind general income developments. Finally, higher incomes are likely to increase the demand for publicly provided welfare services. The overall result may, therefore, be that more growth leads to a deterioration rather than an improvement in public finances. It can help public finances only under the dubious or unrealistic assumption that public sector wages and/or transfers are allowed to fall permanently behind general income developments.

*Higher taxes.* Technically, the fiscal sustainability problem can be solved by sufficient increases in tax rates, either now (for “tax smoothing” reasons) or later when deficits would otherwise start to materialize. However, tax increases can solve the fiscal problem only under the assumption that they do not negatively affect the size of tax bases – or at least that such effects are quite small. We do not believe that this assumption is realistic in economies which already have quite high tax rates and which operate in an increasingly globalized environment. Higher tax wedges would lead to further substitution away from taxed activities (like work in the regular sector) to untaxed activities (like leisure, household production and work in the “informal” sector). They can also have detrimental effects on entrepreneurship, saving and capital accumulation – and thereby on economic growth. In the longer run, internationally mobile tax bases, like highly skilled labour, will spend an increasing proportion of their activity in jurisdictions with a lower tax burden.
Therefore, we do not believe it is advisable in the present Nordic context to attempt to increase tax revenue by raising further the overall tax burden of the economy. This does not exclude, of course, efficiency-enhancing tax reforms where certain taxes may be raised – in particular, perhaps, “Pigouvian” taxes like emission or congestion charges, or taxes on relatively immobile tax bases.

**Higher fertility – more children.** The demographic challenge arises from the trend towards an ageing population with more retirees and fewer workers. Encouraging larger families with more children may sound like a straightforward solution to the demographic challenge, but as a matter of fact it is not. Increasing fertility today would actually lead to an even sharper increase in the dependency ratio over the next two decades. There would be more children to support and educate at the same time that the baby-boomers go into retirement and will become increasingly dependent on care for the elderly. In the longer run, the extra new-borns will experience the same increase in life expectancy and they will therefore not be net contributors to the welfare systems in a lifetime perspective. So, while higher fertility may be desirable for other reasons, it cannot help resolve the fiscal sustainability problem of the welfare state, particularly not over the next couple of decades.

**Immigration.** Migration is a natural part of globalization, and flows of labour can support economic growth by, e.g., alleviating specific skill shortages. Immigration could also bring a temporary relief to the demographic challenge – but only under conditions which we believe to be politically unacceptable or unrealistic for other reasons. First, we must reserve the right to admit only young immigrants who are ready to join the labour force quickly and to accept the jobs offered. That puts high demands on the selection of immigrants with respect to age, education, health and language skills. Second, we must not admit dependents (children, parents, relatives) to come with them unless they also fulfil these criteria. Third, we need to ensure that the immigrants do not rely more on the welfare systems than the resident population, i.e. they must not have higher frequency of, for instance, sick absence, unemployment or early retirement. Even if these politically unrealistic conditions could be met, the positive effects of immigration would peter out as immigrants reach retirement age.
1.6 AN EFFECTIVE WAGE BARGAINING PROCESS IS ESSENTIAL

The parties on the labour market can contribute towards the reforms needed to adapt the Nordic model to its challenges, particularly by introducing a more effective process of wage bargaining. Experiences from Denmark and Sweden demonstrate that a continued role for collective agreements can go hand in hand with quite individualized wage setting.

The role of collective agreements could be reduced to the following tasks, which are of great importance: First, they should continue to impose industrial peace, while leaving much of the negotiations over pay to the local level. Second, central organizations need to agree on certain general conditions, notably those concerning overall working times. Third, the organizations may define rules or boundary conditions for local wage setting.

We believe that there are strong reasons for individualized wage setting, which would deserve more attention also in the case of Finland: The organization of production has changed in ways which give a premium to incentives and flexibility, differently from the days of Taylorist organization. Economic shocks are increasingly firm-specific rather than general, and they therefore call for adjustment within firms. The need for flexible wage setting is also related to the large possibilities for outsourcing of particular functions and tasks. Experience in Sweden and Denmark suggests that decentralized wage formation increases wage dispersion somewhat, while reducing wage drift. On balance we think that macroeconomic stability and comprehensive social protection have changed the environment of the labour market in ways which both underline the importance of more decentralized wage setting and ensure that its consequences should be less of a concern from the point of view of workers.
1.7 PRIVATIZATION AND/OR OUTSOURCING OF PUBLIC SERVICES CAN CONTRIBUTE TO EFFICIENT PROVISION

While it is important that the public sector retains its organizing and financing role for a number of core services, it is equally important to ensure that those tasks are performed in a cost-effective manner. Productivity in the production of such services could be enhanced by having them subjected to competition from other public or private providers. Raising productivity in the provision of public services is indeed essential for resolving the fiscal dilemma described in this report.

But we need to caution against a too simplistic belief in this solution to the fiscal challenges. Many proposals for privatization and outsourcing are based on a false analogy between private and public sector activities. Therefore, claims can be overly optimistic or even entirely wrong-headed. Part of the output from the public sector concerns truly public goods that cannot be individually priced and subjected to market transactions. Obvious cases in point are defence, law enforcement and public administration. Attempts to increase productivity in such areas by way of market-like incentive systems carry with them risks of corruption and serious problems of quality, which may ultimately infringe upon the legal rights of individuals and the rule of law in general. What may look like excessive bureaucracy in these areas may be entirely rational and purposeful from this perspective.

Outsourcing and market solutions are feasible for other services of a more private nature, like education, hospital care and care for the elderly. This may improve service quality by making providers more responsive to client needs and staff more task-oriented. But outsourcing is also associated with important problems of assignment. Handing over these activities to profit maximizing private companies can lead to bad outcomes, since costs are easy to measure but quality of output – in its many dimensions – is very hard to monitor. This is not to say that privatization and outsourcing in the production of welfare services can never be successfully implemented, only that this is a complicated procedure that had
better be tried in individual cases (with learning-by-doing) before being implemented on a large scale.

1.8 Our Guidelines for Reform

The Nordic model faces serious challenges and many proposed solutions do not stand up to scrutiny. Not surprisingly, there are no easy solutions for maintaining a large redistributive welfare state in an environment of ageing populations and intensified global competition. Yet, in order to secure continued political support for free trade and open markets we believe that the core of the Nordic model can and should be preserved. By the core we refer to the comprehensive and mostly mandatory systems for pooling and sharing labour market and other risks. We are in this sense not advocating radical change or an overhaul of the whole system. However, we do see a need for significant reform, including actions for which it may be difficult to get the required political backing. Above we already underlined the importance of an effective wage bargaining process and the potential for enhancing efficiency in the provision of public services. Here we refer briefly to a number of further elements where reconsideration and reform are called for; all these issues are dealt with in the subsequent chapters.

The issues at stake have a bearing on “the social contract”, and they can be illuminated by using the scheme set out in figure 1.1. This figure can be read in two ways. One way is to think of it as showing the net contribution to the public sector over the lifetime of a representative citizen. This citizen will benefit from public (or publicly subsidized) childcare and education when young, will pay net taxes during the active years, and will then again become a net recipient of public transfers and welfare services after retirement. Another way of reading the figure is to think of it as showing the aggregate or average relation between net contributions to the public sector and the age of various cohorts at a certain point of time.

The strains on public finances will depend importantly on both the age profile in net spending as set out in figure 1.1 and on the.
distribution of the population as between the different age cohorts. Some of the challenges of the welfare state can now be rephrased as follows: The “baby boom” phenomenon means that a lot of people are presently or soon changing status from net contributors to net recipients, thereby reducing the positive contribution to public finances indicated by the area between A and B and increasing the negative contribution from the area between B and C. Also, working careers have tended to start later (point A shifting to the right) and end earlier (point B shifting to the left), at the same time that longevity has been increasing (point C shifting to the right). All these changes have the consequence of reducing the total amount of net contributions and increasing public spending on the elderly. A further factor increasing public spending on the elderly are the advances in medical science which continuously bring forward new and more expensive medicines and treatments of diseases (shifting the curve between B and C downwards).
The scheme of the social contract can also be used to explain the directions in which reforms must be sought and action undertaken:

First, work careers could usefully start earlier. There is clearly scope for better efficiency in education, notably in higher education. Also, we see no need for the state to subsidize the "consumption element" in education.

Second, the net taxes paid by those of working age would increase on average if labour force participation were to be raised and unemployment reduced. The Nordics will need to reconfirm the importance that they have traditionally attached to participation in working life and find means to reduce benefit dependency. This calls for lower taxes on work, further modifications of social protection so as to alleviate "unemployment traps", including better use of workfare elements. Policymakers should abolish unnecessary disincentives to work, such as "sabbatical years" and other schemes that discourage active participation in the labour force.

High employment also calls for action to improve the matching of demand and supply in the labour market and well-functioning wage bargaining institutions. Here, the negotiating parties on the labour market rather than the state have important roles to play.

Economic research has demonstrated that active labour market policy measures have had a disappointingly weak effect on total employment. At best such measures can have positive effects on some subgroups, like e.g. youngsters who run the risk of otherwise becoming marginalized. On the other hand, a reduction of unemployment calls for reform of unemployment insurance schemes. There is a strong case for a decreasing time profile in benefit payments as well as an expiry date for their duration. More active monitoring of recipients’ search effort and conditionality of benefits on training or activation schemes can also speed up the transition from unemployment to work.

Third, the effective retirement age should be increased further, including measures weakening the incentives for early retirement, and pensioners should be encouraged to continue working. One way to enhance this would be to give working pensioners more generous tax allowances (referred to in Sweden and Finland as “jobbavdrag” or “ansiotulovähennys” respectively). It would also

....
be important for public authorities to facilitate the provision of work input by the elderly in the third sector.

Fourth, pension costs must not be allowed to become an excessive burden for young age cohorts, and pension rules (benefit levels and statutory retirement ages) should be adjusted in line with increasing longevity. The latter is already the case in the Nordic countries (though indexation of pension rules is done in different ways), but total expenditure on public pensions is still projected to increase significantly, notably in Finland. The outlook and risks attached to projected pension developments could usefully be reviewed with a view to capping the level of expenditure and the contribution or tax rate that rising pension expenditures are allowed to lead to (see Korkman et al. (2007)).

Fifth, the core activities of the public sector in the provision of welfare services should be better defined and the scope of the responsibility for health and old-age care clarified. Given the projected demographics, welfare services will not only absorb huge resources but will also cause serious pressure on tax rates. In the end this pressure can be alleviated only by capping the public provision and/or tax-financed provision of welfare services in one way or another. This is already what happens, as municipalities find themselves financially squeezed and react by lowering quality and/or rationing of, e.g., health and old-age care (thereby creating queues). More transparency with regard to the level and scope of services that citizens are entitled to and can expect would make it easier for citizens to plan (and save) over their lifetime and for complementary private services to develop.

Finally, raising productivity in the provision of welfare services is crucial. There are great difficulties in increasing productivity in the provision of face-to-face services. Nevertheless, such services are always associated with administrative and other tasks which can be rationalized significantly. As already noted above, there is scope in this area for improving incentives and organizations as well as for privatization and outsourcing. However, creating the right conditions for social goals to be enhanced through competitive provision of welfare services call for many hurdles to be overcome.

At best, the Nordic model combines strong government with effective markets. The aspiration to merge efficiency and solidarity...
is worthy and realistic. But the demographic change will increasingly pose a dilemma for the welfare state. The ideal of universalism in the sense of high-quality welfare services available to everybody at no or low cost must be reassessed. Delineating and capping the scope of the public responsibility for our welfare should not be seen as an assault on the model but as a way to preserve its essentials and viability in a world characterized by changing demographics and increasing global competition. There is a need to re-emphasize the importance of work and employment as well as of a proper balance between entitlements and obligations of citizens for the Nordic model to be viable in the future.
There exists a straw man version of the Nordic model. This is the perception of the Nordic model as a socialist experiment with stifling taxes and heavy-handed regulation where paternalistic bureaucrats decide the fate of citizens from cradle to grave. Presumably such a model is neither efficient nor desirable on other grounds. Yet, in this chapter we argue that the Nordic model does indeed exist, and in the next chapter we demonstrate that it has performed reasonable well in the past. The model thus seems to have something in common with the bumble bee, which keeps flying even though it has been claimed that the laws of aerodynamics prove this to be impossible. Clearly the straw man version of the Nordic model needs to be amended.

Small and open economies are heavily dependent on international developments and need to cope with the process of globalization. The global division of labour creates the potential for big gains. However, these gains can be realized only through a process of structural change, a process with winners and losers. Increased openness, therefore, gives rise to fear among workers as well as resistance by trade unions and political decision makers. It is remarkable that citizens and organizations in the Nordic countries have, by and large, understood and endorsed the case for free trade and the open economy. Our hypothesis is that the key feature of the Nordic model is the beneficial and mutually
supportive interaction of openness and collective risk sharing. It follows that the constitutive elements of the model – including tax, transfer and spending policies as well as labour market institutions and labour force participation rates – cannot be evaluated in isolation but have to be seen as part of a comprehensive and, to some extent, coherent system.

This chapter first points to a number of shared attributes of the Nordic countries. These cover areas such as labour market institutions and performance, attitudes and policies with regard to globalization and new technologies, and the design of the welfare state and social policies. However, the focus is not on the visible characteristics as such but on what we perceive as essential for understanding the performance of the Nordic countries and the way their policies have evolved over time. We emphasize two basic and interrelated policy orientations that have played a fundamental role for a long time and notably in the post war period: free trade (in an increasingly broad sense) and collective mechanisms for risk sharing. The Nordic countries have benefited from their openness to globalization in the form of higher productivity and incomes. The welfare state and labour market institutions have nevertheless given protection against the risks associated with economic openness. We argue that collective risk sharing facilitates acceptance of globalization by reconciling the flexibility required by open markets with the security that workers and citizens aspire to. This has helped the Nordic countries to adapt institutions and policies, though often only under the pressure of events, so as make it possible to benefit from and cope with the process of globalization.

2.1 **Free Trade and the Market Mechanism**

The Nordic countries are wedded to free trade and have, with some sectoral exceptions, been in favour of free trade already for a very long time. This policy orientation is easily understandable for any small country. It is particularly rational for countries with a narrow resource base and peripheral location; access to international markets is essential as a precondition for attaining high living stand-
ards. Also, exports will in the long run have to grow fast enough to finance the imports associated with an acceptable growth rate of the economy, which in turn requires the economy to adjust to changes in the external environment in one way or another. The post-war history amply testifies to the importance that the Nordic countries have attached to the maintenance of competitiveness through moderate wage developments and currency devaluations as well as various means of structural policies.

Commitment to free trade does not automatically go hand in hand with a market-friendly attitude more generally. Like most parts of Europe and the world, the Nordic countries were in the first post-war decades highly regulated. Structural economic policies were interventionist, while macroeconomic policies were active and discretionary. The governments were heavily involved in managing industry through, e.g., state companies and subsidized investment.

Considerations of openness and competitiveness were in those days largely restricted to exports of goods and the manufacturing industry, at times supported by devaluations. For other parts of the economy – such as housing, banking, insurance, the food industry, retail trade, agriculture and energy – administrative regulation was extensive and price setting by cartels common. Structural change of the economy was slowed down by selective subsidies to large firms and high taxes on profits in combination with significant tax advantages for investment and retained profits, which tended to lock in capital in firms with a profitable past but not necessarily present.

Capital markets and international financial flows acquired increasing importance in the 1980s. Their growth was stimulated by technological developments in information technology (IT) that substantially reduced the cost of cross-border information flows. The ability to exploit the new financial opportunities and access to international finance of domestic firms was increasingly seen as necessary for their competitiveness. Also, the effectiveness of financial regulation was undermined as a consequence of IT as well as the internationalization of companies and their possibilities for evading regulations. These developments belatedly paved the way for a re-evaluation of capital market controls and foreign exchange market regulations.
The financial deregulations in the late 1980s were badly handled in terms of timing, sequencing and supporting policies, and they were associated with a severe banking crisis in the early 1990s in Sweden and Finland, preceded by a milder crisis a decade earlier in Denmark. By the mid-1990s, Sweden and Finland had experienced the most severe slump since the 1930s with record-high unemployment. Nevertheless, the liberalization of financial markets must be seen as a key step in the development of the market economy in the Nordic countries. It led to a rapid development of financial markets with interest rates determined by the market rather than administrative regulation, improved liquidity, a broad variety of financing alternatives and investment outlets, and better possibilities for managing risk.

There were certainly other important forces in addition to the financial market developments. The deep crisis of the economy and the prospect of membership in the European Union were, for Sweden and Finland, instrumental in engineering a more general reassessment of regulatory and other policies. In these circumstances the Nordic countries increasingly took action to deregulate and foster competition in previously regulated sectors of the economy, such as energy and communication. Tax reform was undertaken to broaden the tax base while lowering tax rates, the dual income tax system was introduced, and capital taxation was changed to enhance its neutrality with regard to financing and investment alternatives. Macroeconomic policies were reoriented away from discretionary action targeted to cyclical objectives towards “norm-based” policies. Monetary policy assumed responsibility for safeguarding price stability in the medium term, and fiscal policy was increasingly geared to the sustainability of public finances in the long run. Benefit levels and other aspects of the welfare state were also the object of reconsideration and action, as discussed below. Even the labour market, not particularly tightly regulated in the first place, underwent changes in the form of moves towards more decentralized wage bargaining.

The political decision-makers in the Nordic countries did not opt with any enthusiasm for the process of liberalization. It was not as if they would suddenly have come to appreciate the virtues of the market mechanism, though the academic crit...
cism of (interventionist) policy failures played some role. Rather, regulatory and other policies were adjusted under the pressure of events. What originally was a commitment to free trade, developed – under the influence of the internal logic of globalization – into a policy embracing the market. The increased prominence given to market-friendly policies may in hindsight be seen as having contributed to the successful changes that have since taken place in the Nordic economies, and which have helped them to cope with the challenges of new technologies and new competitors. Also, in the new environment the Nordic countries have reoriented their policy concern about competitiveness towards policies that pay more attention to the supply side of the economy and that support R&D and innovation.

The claim that the Nordics are complying with and exploiting market forces rather than suppressing them is supported by the data reported in figure 2.1, which shows the OECD’s index of the strictness of employment protection legislation (EPL, vertical axis) and its index of the strictness of product market regulation (PMR, vertical axis). The graph demonstrates that while the Nordics have relatively low levels of employment protection, they have maintained high levels of product market regulation, indicating a balance between regulation and flexibility. This approach has likely contributed to their economic success.

**Figure 2.1**
Regulation in the EU15, 2003

EPL = Summary indicator of employment protection legislation.
PMR = Product market regulation.

These indices are broadly based and systematically compiled; they are the best available measures for international comparisons of regulation in product and labour markets. As is seen, the indices are strongly correlated, though regulation in Sweden is tilted towards the labour market and regulation in Italy in favour of the product market. It also appears that the EU15 countries fall rather neatly into four familiar categories. The Anglo-Saxon countries are the most liberal, having the highest ranks for EPL and PMR (except for Denmark). They are followed by the Nordics, notably Denmark, and then by the Continental countries, while the Mediterranean countries are the ones most bent on regulation according to both indices.

While broadly based, the indices reported in figure 2.1 arguably do not suffice to characterize the attitude of member states to the market mechanism. However, there is a wealth of other information pointing in the same direction. The Nordic countries rank very high in terms of the index for “Ease of Doing Business” (EDB) produced by the World Bank Group. Denmark, Sweden and Finland are all among the top 6 performers in the “Global Competitiveness Index” published by the World Economic Forum. The Nordic countries have a good track record with regard to transposition of and compliance with Community legislation for the internal market. In the area of banking, Denmark and Finland nowadays have low regulatory barriers to competition and all the Nordic countries have relatively light rules for prudential supervision (de Serres et al. (2006)). Turning to a wider perspective, there is an extensive “economic freedom index” compiled by the Fraser Institute, and a globalization index developed by a Swiss institute (the “Konjunkturforschungsstelle” in Zurich). Both of these indices give high ranks to the Nordic countries, and the ranking between groups of countries is roughly the same as in figure 2.1. According to Bergh (2006), the Nordic countries have in the past decades improved their ranking significantly according to both indices. It is also interesting to note that Denmark, Sweden and Finland are among the six top nations in the world (with Singapore, Hong Kong and Norway) in the subindex of the EDB measuring external openness, that is, the “trading across borders”.

Markets in the Nordic countries are less tightly regulated than in Southern Europe and the Continent.
To repeat, the argument of this section is the following: in the 1980s and 1990s the Nordic countries accepted openness to financial capital and factor movements as an extension of their long-standing commitment to free trade in the new circumstances created by the IT revolution and globalization. After the process had started, the arguments for further liberalization turned out to be strong and self-reinforcing. The perception of the Nordic countries as being heavily regulated has no obvious justification, certainly not if the EU15 is used as the reference.

In fact, the Nordics appear to be among the frontrunners in liberalization. This has facilitated a successful transformation of their economies in favour of knowledge-intensive activities, and the Nordic countries have thereby been successful in adapting to the on-going changes in the global allocation of labour. The process, which has been remarkably swift notably in Finland, has been supported by the existence of high-quality education for large shares of young age cohorts and government support for research and innovation. (These issues are discussed further in chapter 3.) As will be argued next, the process has also been facilitated by the security provided through collective mechanisms for risk sharing.

## 2.2 COLLECTIVE MECHANISMS FOR RISK SHARING

Globalization is associated with big changes and entails risks: it can be seen as offering beneficial opportunities or as posing threats. Individuals are normally not able to insure themselves against the risks of losing their job or finding their skills outdated. There is a role for social insurance or, more generally, for risk sharing by collective means. The welfare state, in conjunction with labour market institutions, plays a key role from this perspective. Governments have over the years come to assume a wide range of functions in the areas of redistribution and provision of services that go well beyond the traditional (“nightwatch”) role of upholding law and order and public administration. Much of what the public sector
The Nordic countries are indeed well-known for their big welfare states and high tax rates. Social insurance and protection systems have a broad coverage and are highly inclusive or “universal” in the sense that all citizens have, as a matter of legal right, certain entitlements in the case of eventualities like sickness, disability or unemployment. These entitlements are not conditional on, say, ability to pay or previous tax payments by the individuals concerned. Social protection provides for relatively generous income replacement in addition to flat-rate benefits, which are often not means-tested. Financing is largely by taxes and the welfare state is therefore associated with a lot of income redistribution both between individuals and over the lifetime of individuals. Public provision of social services, available to all citizens, is free of charge or heavily subsidized. It meets relatively high standards in the sense of corresponding to the needs or requirements of a large fraction of the population.

The border line between insurance and redistribution is not clear-cut, as social insurance is often associated with some redistribution. Also, much of the tax-financed activities of the public sector can in a broader sense be perceived as forming part of collective risk sharing. The provision of welfare services and transfers tends to reduce the incidence and the risk of poverty. An egalitarian society with a strong role for the public sector in areas such as child care, education, health and old-age care and pensions may in a broad perspective appear as an attractive option, given the risk aversion typically exhibited by individuals (Sandmo (1998) and references therein).

The Nordic countries are egalitarian societies in the sense that income and wealth differentials are smaller than elsewhere. One might speculate that this is because citizens and decision-makers in these countries attach great importance to social equality. However, it is difficult to believe that egalitarianism is in the genes: why would there be a particular predisposition of people in the North to value equality in relation to efficiency differently from other human beings? A more promising line of argument, followed here, is to stress that the preconditions for egalitarian policies to
be viable or to succeed have been exceptionally favourable in the Nordic area.

In particular, the Nordic countries are small and ethnically homogenous, and they were so notably at the time that the welfare state developed. (Subsequently immigration has been substantial and policies have not succeeded fully in integrating the immigrants into the labour market and the society at large.) Ethnic homogeneity is conducive to the emergence of trust, the key ingredient in “social capital”, which is widely believed to improve the efficiency of society by facilitating coordinated action. In fact, the level of trust is higher in the Nordic countries (and the Netherlands) than elsewhere according to available indicators, such as the European Values Survey, which typically measure trust by the share of people who agree that “most people can be trusted”. A high level of trust is also associated with low corruption, which is essential for confidence in authorities and the acceptability of redistributive policies. Surveys suggest that the Nordic countries have an exceptionally low level of corruption (Transparency International).

It has often been suggested that the high Nordic ambition in the area of egalitarian policies has to be seen against the background of both their ethnic and their religious homogeneity. Reference has also been made to the long history of independent farmers and the labour movement having influence in local and national matters of policy.4 This has arguably fostered a high level of trust of citizens and the emergence of a relatively incorrupt and efficient public administration, capable of planning collective mechanisms of risk sharing and executing the social programmes of a large welfare state. The result has been visible not only in the size and tasks of the public sector; some of the attitudes with regard to macroeconomic policy and labour market institutions can also be interpreted as aiming at risk sharing.

A main objective of macroeconomic policies is to maintain full employment and an effective use of resources. However, macroeconomic policies can also be seen as a way of enhancing the economic security of citizens and reducing risks in investment. These ambitions were underneath the accommodating monetary and fiscal policies that were long pursued in all the Nordic countries in the form of, inter alia, recurrent devaluations and steady
employment increases in the public sector acting as an “employer of last resort”. While low and stable unemployment has remained an important policy objective, the strategy and means of enhancing the achievement of the objective have changed markedly in the past two decades.

The Nordic labour market institutions – high unionization, highly coordinated wage bargaining geared to wage compression, active labour market policies, and relatively generous unemployment benefits – can also be interpreted as reflecting the inclination towards collective risk sharing (see, e.g., Agell (2002)). More specifically, the institutional system, based on coordinated negotiations between strong partners and supporting policies by the government, may be seen as a way of offering security to workers without some of the drawbacks of tight legislative labour market regulation.

The above-mentioned reasons may partly explain why a big welfare state is or has been more viable in the Nordic countries than in many other cultural and political contexts. Nevertheless, the policies in the Nordic countries ran increasingly into excesses in the 1970s and 1980s. In Sweden, for instance, public spending exceeded 60 per cent of GDP in the late 1980s, and marginal tax rates were about 70 per cent for most full-time employees. Labour market regulation was tight and the goal of wage policy increasingly became “equal pay for all work”, thus undermining incentives for skill formation and labour mobility. Monetary and fiscal policies were accommodating to an extent that was increasingly seen as unsustainable.

As noted in the preceding section, a number of developments – such as financial liberalization, the deep crises, and EU membership – triggered a reassessment of policies, paving the way not only for further deregulation but also for a new approach to macroeconomic policies and, to some extent, for acceptance of more flexibility in the labour market. While the basic objectives remained unchanged, the big budget deficits associated with the crisis also led to a reconsideration of the public-sector and welfare-state policies. There was some retrenchment of the public sector with cuts in benefit levels and subsequently in tax rates. A number of reforms were introduced with a view to improving the

---

Macroeconomic policies and labour market institutions can also be seen as mechanisms for collective risk sharing

Excesses call for a reversal, all the Nordics undertook significant reforms
incentive effects of social security programmes, pension reforms being an important case in point. The provision of public services has been partly privatized or outsourced and it is increasingly being exposed to the forces of competition. The timing and sequencing differ somewhat between countries, but all Nordic countries have in the past two decades undertaken significant reforms of their public sectors and welfare policies.

As of now, the public sector in the Nordic countries is still large by international comparison. It absorbs a share of total income which is larger than in other countries, the tax burden is high, and it extracts an amount of resources that is close to or exceeds 50 per cent of GDP (table 2.1, columns 1 and 2). Much of this is social expenditure. However, social transfers are more heavily taxed in the Nordic countries than elsewhere. Also, one should take account of publicly mandated private expenditure or of social benefits, which legislation forces employers to provide (Adema and Ladaique (2005)). Making these adjustments, the Nordic countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Tax burden in 2006, % of GDP</th>
<th>Total expenditure in 2006, % of GDP</th>
<th>Social expenditure in 2003, % of GDP</th>
<th>Child care and early education in 2003, % of GDP</th>
<th>Average net unemployment benefit replacement rate*</th>
<th>Gross replacement rate in pensions*</th>
<th>Progressivity index of pensions*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denmark</td>
<td>49.0</td>
<td>51.1</td>
<td>23.8</td>
<td>1.6</td>
<td>78</td>
<td>83.6</td>
<td>59.3</td>
</tr>
<tr>
<td>Sweden</td>
<td>50.1</td>
<td>55.5</td>
<td>28.2</td>
<td>1.3</td>
<td>73</td>
<td>63.7</td>
<td>12.9</td>
</tr>
<tr>
<td>Finland</td>
<td>43.5</td>
<td>48.5</td>
<td>22.7</td>
<td>1.4</td>
<td>73</td>
<td>63.4</td>
<td>7.6</td>
</tr>
<tr>
<td>Germany</td>
<td>35.7</td>
<td>45.6</td>
<td>29.5</td>
<td>0.4</td>
<td>73</td>
<td>39.9</td>
<td>26.7</td>
</tr>
<tr>
<td>France</td>
<td>44.5</td>
<td>53.7</td>
<td>28.8</td>
<td>1.2</td>
<td>62</td>
<td>51.2</td>
<td>24.6</td>
</tr>
<tr>
<td>Austria</td>
<td>41.9</td>
<td>49.1</td>
<td>23.9</td>
<td>0.6</td>
<td>64</td>
<td>60.1</td>
<td>30.4</td>
</tr>
<tr>
<td>Belgium</td>
<td>44.8</td>
<td>49.0</td>
<td>26.0</td>
<td>0.8</td>
<td>62</td>
<td>40.7</td>
<td>58.8</td>
</tr>
<tr>
<td>Netherlands</td>
<td>39.5</td>
<td>46.7</td>
<td>20.6</td>
<td>0.5</td>
<td>73</td>
<td>81.7</td>
<td>0.0</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>36.3</td>
<td>40.4</td>
<td>-</td>
<td>0.9</td>
<td>71</td>
<td>90.3</td>
<td>18.6</td>
</tr>
<tr>
<td>Italy</td>
<td>42.7</td>
<td>50.1</td>
<td>25.3</td>
<td>0.6</td>
<td>5</td>
<td>67.9</td>
<td>3.1</td>
</tr>
<tr>
<td>Spain</td>
<td>36.7</td>
<td>38.5</td>
<td>19.6</td>
<td>0.5</td>
<td>50</td>
<td>81.2</td>
<td>18.8</td>
</tr>
<tr>
<td>Greece</td>
<td>27.4</td>
<td>36.7</td>
<td>-</td>
<td>0.4</td>
<td>25</td>
<td>95.7</td>
<td>2.6</td>
</tr>
<tr>
<td>Portugal</td>
<td>35.4</td>
<td>46.1</td>
<td>23.2</td>
<td>0.8</td>
<td>63</td>
<td>54.3</td>
<td>18.8</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>37.4</td>
<td>45.1</td>
<td>22.8</td>
<td>0.6</td>
<td>63</td>
<td>34.4</td>
<td>81.1</td>
</tr>
<tr>
<td>Ireland</td>
<td>31.7</td>
<td>34.0</td>
<td>15.6</td>
<td>0.2</td>
<td>70</td>
<td>38.2</td>
<td>100.0</td>
</tr>
</tbody>
</table>

* The sum of taxes on income and wealth, capital taxes, social security contributions and indirect taxes, from OECD Revenue Statistics 1965–2006.
* OECD Economic Outlook (2007), General government total outlays, Annex Table 25.
* Net publicly mandated social expenditure, see Adema & Ladaique (2005).
* Average net replacement rates in per cent over a period of 60 months of unemployment in 2004, one earner at average wage, married couple, with social assistance. OECD (2007), Benefits and Wages, Paris (www.oecd.org/els/social/workincentives).
are not at the top of the league, though Sweden ranks high in terms of social expenditure relative to GDP (column 3).

A particular feature of Nordic social policies is the high share of spending on child care and early education (column 4), and the Nordics are also unique in spending as much as 3–4 per cent of GDP on families in the form of cash and services. The replacement rate is high in unemployment insurance (column 5), but it may be added that eligibility for benefits in the Nordic countries is increasingly conditional on “effective” availability to the labour market, that is, workfare elements. Replacement rates in pensions (column 6) are higher in the North than in the Anglo-Saxon countries but lower than in the South, except for Denmark in some cases. Also, pensions in the Nordic countries have a low “progressivity index” (column 7), meaning that benefits are strongly related to contributions and are therefore actuarially rather fair, again with exception for Denmark that has a quite generous flat-rate pension (“folkepensionen”). In sum, public spending in the Nordic countries is high but a significant part of it is geared towards supporting a high rate of labour force participation.

Needless to say, it would be easy to point to significant differences between the Nordic countries. Yet, in an international comparison it is the similarities that are striking. Comparing the Nordics with other countries in Europe or elsewhere, one is impressed by the perception of a specific Nordic “cluster” in a number of dimensions. It would indeed be easy to multiply the examples of such similarities by covering in more detail areas such as labour market institutions, the design of the welfare state, policies with regard to new technologies and research and development or environmental policies.5

However, it is not the number of similarities that is important but the systemic interrelations between the key institutions and policies. To recapitulate, the argument of this chapter is that the Nordics have in recent decades broadened their long-standing commitment to free trade and modernized their collective mechanisms for risk sharing under the pressure of and in response to globalization. Openness to globalization and emphasis on social security are important not only in themselves but also because they are interconnected and mutually supportive. Free trade and factor
mobility are key factors in generating high productivity and rising incomes. But some of the consequences of open competition on global markets, including off-shoring of activities and layoffs of workers, are politically more acceptable if their consequences for workers and local communities are softened by social safety nets and labour market policies.

Evidence indeed suggests that people in countries with extensive social security systems have a more favourable attitude to free trade and globalization (Sanz and Coma (2007)). It is also plausible that external openness increases the demand for the insurance and security that the welfare state can offer, which is the interpretation made by Rodrik (1998) of the positive correlation between openness and the size of the public sector. The coexistence or combination of collective mechanisms for risk sharing and openness to globalization is therefore no coincidence but a key feature of what might be regarded as the “Nordic model”. It amounts to a system of generalized “flexicurity”, the purpose of which is to help the economy and society to cope with risks and adapt to new requirements in times of rapid change.
ENDNOTES

1 Wikipedia refers to popular views, according to which “the laws of aerodynamics prove that the bumble bee should be incapable of flight, as it does not have the capacity (in terms of wing size or beat per second) to achieve flight with the degree of wing loading necessary”. There is an interesting sequel to this, because Wikipedia also reports that the erroneous view is based on “a simplified linear treatment of oscillating aerofoils”, while “more sophisticated aerodynamic analysis shows that the bumble bee can fly because its wings encounter dynamic stall in every oscillation cycle”. The analogy with the bumble bee obviously suggests that the Nordic model is something more than just high taxes and big government. On this analogy see also Thakur et al. (2003).

2 There are residual forms of social assistance which are means-tested also in the Nordic countries, and which therefore give rise to “poverty traps”. However, it remains the case that countries with universal schemes in general have less means-testing and less severe poverty traps than many other countries.

3 This is the case notably if one starts from a (“Rawlsian”) perspective of a hypothetical individual who does not know what his position in society may be or become (who is reflecting on social choices from behind the “veil of ignorance”). The purpose for which Rawls employs this thought experiment is to help make the theoretical case for certain basic principles of justice. Its practical relevance is, needless to say, weakened by the fact that actual political discourse does not occur in a vacuum but in a context where various actors have well-defined and often conflicting interests.

4 While now highly secular, the Nordic culture is strongly influenced by the Lutheran faith, which gives prominence to a strong work ethic and solidarity between members of society (and even conformist pressures). The long history of independent farmers and the tradition of local self-government are other features worth noting. Scandinavian kings have shared some power not only with the nobility and the church but also with the land-owning farmers for ages. The administration of the state was rather effectively organized in the Swedish kingdom as early as the 16th century. The Nordic countries have never been class societies to the same extent as, say, France or England. In the 1920s (at the latest), the labour movement and the Nordic Social Democratic parties abandoned the view that capitalism would collapse because of its inherent contradictions. Instead, the reformist vision was that the socialist future should be built not on the ruins of capitalism but on a flourishing and growing economy. Increasingly, as the labour movement acquired influence and power, it became an element of stability in society – though later in Finland than in the other Nordic countries.

As was noted in chapter 1, there is a general perception that the Nordic countries have done well in a number of respects and notably in terms of reconciling the requirements of economic efficiency with a high degree of social equality. This chapter will present some facts to help evaluate the justification of that perception. We will first examine aspects of economic efficiency in terms of activity levels and growth performance, and then turn to social considerations. It should be emphasized that we now look into the rear mirror; this chapter provides a retrospective evaluation of past performance. Needless to say, there is no strong reason to presume that future developments will prolong past trends; many countries and regions have experienced significant discontinuities in their economic development. Subsequent chapters will set out and assess some of the challenges that we think are of particular importance in catering for the future.

3.1 EMPLOYMENT AND PRODUCTIVITY LEVELS

There is no single measure of economic efficiency that could be used for comparing Nordic performance to that of other areas or countries. However, it may be argued that it makes sense to
consider employment and productivity; the economic efficiency of a country may be deemed satisfactory to the extent that there is a high level of both employment and productivity. Productivity needs to be considered not only in terms of its level but notably in a dynamic perspective (which is done in the next section), as productivity growth is by far the most important source of higher living standards. One may also ask which countries the Nordics should be compared to. Here we compare the Nordics mainly to the EU15 and the US. One might object that a comparison with the EU15 gives too rosy a picture of the Nordics because economic growth in the reference group has been weak for many years. Why not compare with the dynamic economies in the East? On balance, however, we think the EU15 is a reasonable reference because of similarities in the economic, institutional and cultural background.

The performance of the Nordics, as compared to other European countries, is good in terms of the employment and productivity levels (figure 3.1). The level of employment is high, partly

![Figure 3.1](image_url)

**Figure 3.1** Employment (average hours worked) and productivity per hour

*In Purchasing Power Parity terms by the EKS method.

Source: The Conference Board and Groningen Growth and Development Centre.
because of the high rate of labour force participation of women. True enough, average hours worked (of the whole population) are higher in Spain and Portugal, but productivity is low in these countries. Also, the level of productivity is higher in many continental countries, but they tend to have low employment rates. High employment and high productivity is achieved mainly by the Anglo-Saxon and the Nordic countries. This also means that these countries achieve a relatively high level of GDP per capita, which is the product of hours worked and productivity. To show this, figure 3.1 also gives the “level curves” (or “isoquants”) going through the points for Germany and Finland; the defining characteristic of the level curves is that all points on these curves represent the same level of GDP per capita as in Germany and Finland, respectively. One may add, though, that disposable income and private consumption per capita are low in the Nordic countries, barely above the level in Southern Europe, as the public sector absorbs a large fraction of the income generated in the economy.

3.2 GROWTH AND TECHNOLOGY

We now turn to the dynamic perspective and examine the Nordic growth performance. A first observation is that the Nordic growth rate of GDP per capita since 1960 does not seem to deviate much from what could be expected in a “catching up” framework (see figure 3.2). Only Finland achieved, over the period 1960–2006, a growth rate of GDP per capita somewhat above what could have been expected assuming catching up and considering the level of GDP per capita at the start of the period. Growth in Denmark and Sweden was below the average in the EU15, but this seems broadly explicable in view of their relatively high starting level. Ireland is an obvious “outlier” with a rate of growth roughly one per cent higher than could be expected on the basis of the average relation between the level and rate of growth of GDP per capita.

More information on the recent growth performance is provided by figure 3.3, which shows the development of GDP per capita in purchasing power parity terms relative to the US
from the mid-1980s. Finland has gradually been catching up with Denmark and Sweden; the Nordics are now very close also in this dimension. For Finland and Sweden the early 1990s were a
particularly difficult period, as both countries experienced major recessions. Since then, both countries have grown more rapidly than both the euro area and the US. Overall, Denmark has also kept pace with growth in the US, while growth in the euro area has been quite weak.

The growth performance of the Nordic economies has in recent years been associated with an increased use of new technologies, reflecting the readiness of these countries to participate in and benefit from information and communication technology (IT) developments. In fact, these countries were early starters in the use of IT and had high shares of IT capital relative to most countries already in the mid-1990s, i.e. at the time that the IT revolution really took off. In the Annex to this chapter we will use growth accounting to assess the quantitative significance of various sources of growth. It indeed turns out that the contribution of IT capital to growth has been significant since the 1990s in the Nordic countries (similar to that in the US) and typically bigger than that of non-IT capital.

Data on the whole confirms that the Nordic countries do well on indicators of IT diffusion, such as IT expenditure or personal computers (PCs) per capita. Figure 3.4 shows the expenditure on IT as a share of GDP and the number of computers per 1000 people. Sweden is at the top in both respects and also Finland scores well above the average. Denmark is close to the EU average for IT expenditure but scores very high in terms of the number of PCs per population. According to the World Economic Forum, these Nordic countries are at the top (with positions 1, 2 and 4) in a global ranking measuring the environment for IT as well as the readiness to use IT by various stakeholders.

It should be emphasized that these indicators measure the diffusion or use of IT in the economy, while a different picture emerges from looking at the production side. In fact, IT production has a strong role notably in the Finnish and to some extent in the Swedish economy: the share of IT in total industrial production in 2004 was some 11 and a bit over 7 per cent respectively, while its role in Denmark and the EU15 is on average more modest.

Many important aspects of technology are not captured by the amount of IT capital or IT diffusion. Notably for Finland and
Sweden, the computations in the Annex suggest that there has also been an important growth contribution from general technological progress (referred to as growth in total factor productivity or TFP), which cannot be assigned to any specific factor. A difficulty with TFP growth is that it reflects factors which are not directly measurable (with reasonable precision), such as structural change, innovations, and improvements in the general knowledge and organization of economic activities. Among such indirect factors of growth, it is usually thought that a high quality of the education system, strong competition and deregulation, and innovation and entrepreneurship are of particular importance. We will next make some remarks on these factors.

Education is often considered a key determinant of both TFP growth and economic growth in general, though the measurement of human capital and its formation is very difficult. Indicators such as years of schooling or changes in the educational composition of labour do not capture all the potential effects of investment in human capital. In particular, labour quality improvements may be complementary to technological progress by, for instance, facilitating the adoption of new technologies.5
The Nordic countries spend on average comparatively much on education, and young people in these countries stay rather many years in education. In fact, the median age of persons in tertiary education is quite high in the Nordic countries (some 24–25 years), much higher than in, for instance, the US or Ireland (20–21 years). This may not only indicate something about investment in human capital, but may also suggest that there is scope for improvements in the efficiency of Nordic university systems. Needless to say, tertiary education may be of particular importance for the diffusion of new technologies and economic growth prospects; we will return to this aspect in chapter 8. Here we will only make the observation (figure 3.5) that the Nordic countries spend more on educational expenditure, up until but not including tertiary education, than most other EU15 countries. The mean performance of students in mathematics is better in high-spending countries, including the Nordics, though the correlation between spending and performance is weak.

Figure 3.5
Educational expenditure and student performance

- Mean score for student performance in mathematics according to the PISA 2003 evaluation.
- Primary, secondary and post-secondary non-tertiary education in 2004, per cent of GDP.

As technological change is to a significant degree associated with the emergence of new and more productive firms, the degree of competition is potentially an important element behind TFP growth. One way for public policy to influence competition is through reform of regulatory policies – a less regulated economy makes it easier to establish new firms and thereby enhance competition in the economy. The findings of Alesina et al. (2005) suggest that regulatory reform also leads to increased investment of firms, so that effects of competition can partly work through increased capital accumulation and not only through TFP growth.

The strictness of regulation in the EU countries can be illustrated by the structural indicators on product market regulation and legislative employment protection constructed by the OECD, which were already presented in figure 2.1 in the preceding chapter. The UK and Ireland (as well as the US) are benchmark cases, having little regulation in labour and product markets. As is seen from the figure referred to, all the Nordics appear to be among the countries with a particularly low degree of regulation. This is important, because conventional sources of growth might be less sensitive to regulatory intervention than sources of growth relying on high-tech and new products, where competition should be particularly encouraged.

For labour markets, legislative employment protection in Denmark is quite weak. It is somewhat more stringent in Finland and notably in Sweden. However, both countries have in recent years taken some steps towards lowering employment protection, Finland with respect to regular employment and Sweden with respect to temporary employment.

**Promoting innovations and facilitating start-ups of new production activities** is another possible policy tool for improving TFP growth. It is, however, difficult to find accurate measures of innovative activities and start-ups of new production that are relevant for long-term growth. Here we consider two indicators, venture capital (VC) financing and investment in R&D, both of which are measured as the ratio of spending to GDP.

As to venture capital financing, the statistical data distinguish between “early stage” and “late stage” or “expansion” venture finance. The US is a clear leader (table 3.1), but Finland and Swe-
den also do well in terms of both indicators. A further interesting indicator for VC investment is the share of the investment that goes into different forms of high-technology activities. Here the picture is broadly similar: the Nordics are in this respect ahead of EU on average but well behind the US.

The figures suggest that the Nordic countries are doing relatively well in venture capital undertakings. However, it should be emphasized that this data shows only VC spending and not returns to VC investments; these results may give too rosy a picture. Finally, it may be noted that R&D spending as a share of GDP, which is another indicator of innovative activity that may be relevant for general technological progress, is higher in the Nordics (at 2.5–3.5 per cent) than in the EU15 and the US (at some 2 per cent).

Thus, the Nordic countries are doing significantly better than other EU countries as regards innovative activities, and they appear to be comparable to or not very far behind the US in these areas. More generally, this section and the Annex support the view that the Nordics have been able to create institutions and policies (in areas such as education, market regulation and innovation), which have been conducive to a relatively favourable growth performance notably since the mid-1990s.

Table 3.1
Venture capital investment, relative to GDP, 2000–2003

<table>
<thead>
<tr>
<th></th>
<th>Early stage</th>
<th>Later stage&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Communication</th>
<th>IT</th>
<th>Health/bioscience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denmark</td>
<td>0.057</td>
<td>0.065</td>
<td>13.2</td>
<td>19.3</td>
<td>28.2</td>
</tr>
<tr>
<td>Finland</td>
<td>0.085</td>
<td>0.104</td>
<td>13.5</td>
<td>20.0</td>
<td>1.3</td>
</tr>
<tr>
<td>Sweden</td>
<td>0.088</td>
<td>0.147</td>
<td>10.2</td>
<td>13.9</td>
<td>17.3</td>
</tr>
<tr>
<td>EU</td>
<td>0.041</td>
<td>0.089</td>
<td>13.5</td>
<td>11.7</td>
<td>9.9</td>
</tr>
<tr>
<td>US</td>
<td>0.115</td>
<td>0.260</td>
<td>26.8</td>
<td>35.1</td>
<td>13.0</td>
</tr>
</tbody>
</table>

* Expansion and replacement. All figures are averages for 2000–2003 relative to GDP.

Source: OECD.
3.3 Social equality

Economic efficiency is important in its own right and as a precondition for the realization of other ambitions, but it is not in itself the only or the most important goal of society. While it is unclear how the ultimate objective should be defined, there is no doubt that the Nordic political system attaches great importance to social considerations and the achievement of social equality or “justice”. This section will offer some brief observations on this vast topic.

A first observation is that the Nordic countries, again compared mainly to the EU15, are characterized by a rather low degree of income inequality and a relatively high degree of social mobility (figure 3.6). The degree of income inequality here refers to the Gini coefficient of the distribution of income after taxes and transfers. While income inequality is rather similar in most countries before taxes and transfers (see Mahler and Jesuit (2006)), income inequality after redistribution via taxes and cash benefits differs considerably, and would most probably differ even more if

Social welfare and equality are difficult to measure, but many indicators point in the same direction

![Figure 3.6 Income inequality](image-url)

**Figure 3.6**

Income inequality

also benefits in kind were included. Inequality is low in the Nordic countries as well as in the Netherlands and Austria, while it is high in the Anglo-Saxon and South-European countries.

Social mobility refers in this context to a measure of intergenerational income elasticity, i.e. a measure of the strength of the relationship between income levels of children and parents. There are several possible reasons why children tend to “inherit” their parents’ socio-economic status (genes, wealth, transmission of learning behaviour and attitudes from parents to children). Redistributive family policies and particularly the educational system are probably some of the main forces working in the opposite direction and contributing to intergenerational income mobility.

As is seen from figure 3.6, the intergenerational income elasticity is lower, that is, social mobility is higher in the Nordic countries than in France or the UK (or in the US). This may be deemed noteworthy, as few people find it desirable that the socio-economic status is strongly hereditary whatever the views held on current income inequality.

A second observation is that the Nordic countries score well in terms of indicators of social welfare. In figure 3.7 we show a measure of social expenditure and the OECD’s “composite social index”, which is a broad-based measure of social well-being that aggregates a number of sub-indices covering “self-sufficiency”, equity, health and social cohesion. The composite indicator gives the highest ranks to Sweden, Denmark and Finland, while low ranks are accorded to the countries in the South. This measure is strongly correlated with GDP per capita, though the Nordic countries get higher ranks for their social performance as compared to their GDP per capita (contrary to, for instance, the US). As is seen, the Nordics achieve comparatively good results without in all cases being among the high spenders.

The observations in this and the preceding chapter substantiate the claim that there exists a Nordic model in the sense of a number of shared attributes that are economically, socially and politically significant. What is the “bottom line” with regard to the performance of this model? Employment and productivity rates in the Nordic countries are relatively high, the former more so than the latter. The growth rate of GDP per capita has been
satisfactory, notably since the mid-1990s. (Also, price stability has prevailed and the general government budget is in surplus.) The Nordics have embraced globalization and are at the forefront in adopting new technologies. With regard to the social area, the Nordic countries are consistently at the top in terms of income equality, social mobility over generations, and broad indicators of social welfare. In all, the Nordics perform fairly well in economic terms and they rank quite high according to social indicators.

On balance, these observations do not suggest that the Nordic countries have, in the recent past, been paying a heavy price for their large public sectors in terms of economic distortions and inefficiency caused by the high tax rates. This need not be seen as surprising, as the effects of taxes and public expenditures are likely to depend very much on their content and context. Public action may obviously contribute to economic efficiency by correcting for market failures, by allowing for an improved risk allocation through social insurance, and by investing in infrastructures and human capital (see, e.g., Lindbeck (2006)). Increased income security and redistribution may also, up to a point, promote not only social

So far the bumble bee has been flying – but what about the future?
stability but also economic growth (Alesina and Rodrik (1994)). The design and implementation of policies has, by and large, helped the economy to cope with the challenges of globalization and new technologies. In other words, the interaction of policies and markets has been such as to allow the “bumble bee” to fly. This is comforting, but the real question is whether we can count on this continuing to be the case in the future.
ANNEX: GROWTH ACCOUNTING

The Nordic countries have relied strongly on the IT revolution for their economic growth success. The methodology of growth accounting allows us to assess the quantitative importance of this and other sources of growth, such as the growth of conventional capital and labour input as well as general technological change (referred to as total factor productivity or TFP).

Growth accounting tries to uncover the sources of economic growth by considering the production side of the economy. The growth of aggregate output is decomposed into contributions from growth in different factor inputs (capital, labour and other factors) and from general technological change. The method can be used in a flexible way depending on the availability of data on inputs of productive factors. It should be noted that it is not possible to measure general technological change directly, so its effects are shown by the residual in the growth accounting decomposition. In this study, we have used the method to decompose overall GDP growth into contributions from the growth of labour input, non-IT capital input, IT capital input and general technological progress (total factor productivity). The contribution of each productive factor follows from its growth rate and its relative importance in production. The decompositions are based on the formula:

\[
\text{GDP growth rate} = \text{contribution of labour} + \text{contribution of non-IT capital} + \text{contribution of IT capital} + \text{residual contribution (TFP)}.
\]

We now consider the three Nordic countries, using the growth accounting technique, and we also compare developments to those of the US and the EU15. Table 3.2 shows the results of the growth accounting computations\(^{11}\) (first panel), the rate of accumulation of IT and non-IT capital (second panel), the growth of labour input (third panel), and technological progress or TFP (last panel).

Several observations can be made. First, information technology has played a fairly big role (first panel in table 3.2). The Nordics are much like the US in the sense that the contribution of IT
capital to GDP growth, since the mid-1990s, has been significant – and typically larger than that of non-IT capital. In fact, these countries were early starters in the use of IT and had high shares of IT capital relative to most other countries already in the mid-1990s, i.e. at the time that the IT revolution took off.

Second, general technological change (TFP) has been important for the US, for Finland and also, to an extent, for Sweden. It seems to have played much less of a role in Denmark and the EU15. TFP growth can be thought of as a measure of technological progress, which is not embodied in the explicit factors of production, i.e. in labour and the various types of capital. The non-measurable factors in TFP include innovations and improvements in general knowledge and the organization of production. However, since TFP growth is measured as a residual, it also contains effects such as cyclical variations, pure changes in efficiency, and measurement errors.12

Third, there is more variation in the growth rates for conventional capital. Denmark and Sweden have had positive growth in conventional capital as well, whereas for Finland conventional capital has played almost no role in the rapid growth in the second half of the 1990s. Investment in conventional capital continued to make a significant contribution to GDP growth in the US.

### Table 3.2

<table>
<thead>
<tr>
<th></th>
<th>Denmark 95–00</th>
<th>Denmark 00–04</th>
<th>Sweden 95–00</th>
<th>Sweden 00–04</th>
<th>Finland 95–00</th>
<th>Finland 00–04</th>
<th>USA 95–00</th>
<th>USA 00–04</th>
<th>EU15 95–00</th>
<th>EU15 00–04</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GDP growth</strong></td>
<td>2.8</td>
<td>1.3</td>
<td>3.5</td>
<td>2.0</td>
<td>4.9</td>
<td>2.3</td>
<td>4.2</td>
<td>2.4</td>
<td>4.2</td>
<td>1.5</td>
</tr>
<tr>
<td><strong>Growth contribution</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labour</td>
<td>0.4</td>
<td>-0.1</td>
<td>0.7</td>
<td>-0.4</td>
<td>1.0</td>
<td>-0.3</td>
<td>1.3</td>
<td>-0.3</td>
<td>0.6</td>
<td>0.3</td>
</tr>
<tr>
<td>IT capital</td>
<td>1.0</td>
<td>0.5</td>
<td>1.1</td>
<td>0.4</td>
<td>0.6</td>
<td>0.5</td>
<td>1.1</td>
<td>0.5</td>
<td>0.6</td>
<td>0.3</td>
</tr>
<tr>
<td>Non IT capital</td>
<td>0.8</td>
<td>0.9</td>
<td>0.4</td>
<td>0.2</td>
<td>-0.1</td>
<td>0.1</td>
<td>0.7</td>
<td>0.4</td>
<td>0.6</td>
<td>0.5</td>
</tr>
<tr>
<td>TFP</td>
<td>0.6</td>
<td>0.3</td>
<td>1.3</td>
<td>1.9</td>
<td>3.3</td>
<td>2.0</td>
<td>1.1</td>
<td>1.7</td>
<td>0.9</td>
<td>0.4</td>
</tr>
<tr>
<td><strong>Growth of capital services</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IT capital</td>
<td>10.9</td>
<td>17.6</td>
<td>19.1</td>
<td>6.8</td>
<td>13.8</td>
<td>10.8</td>
<td>17.9</td>
<td>2.8</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Non IT-capital</td>
<td>1.4</td>
<td>2.9</td>
<td>1.7</td>
<td>0.7</td>
<td>-0.2</td>
<td>0.2</td>
<td>9.1</td>
<td>1.8</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Growth of labour input</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total hours</td>
<td>0.6</td>
<td>-0.1</td>
<td>1.0</td>
<td>-0.6</td>
<td>1.6</td>
<td>-0.5</td>
<td>1.9</td>
<td>-0.4</td>
<td>0.9</td>
<td>0.4</td>
</tr>
<tr>
<td>Hours of workers</td>
<td>0.4</td>
<td>0.1</td>
<td>0.4</td>
<td>-0.5</td>
<td>-0.6</td>
<td>-0.8</td>
<td>-0.5</td>
<td>-0.3</td>
<td>-0.5</td>
<td>-0.3</td>
</tr>
<tr>
<td>Number of workers</td>
<td>1.0</td>
<td>0.2</td>
<td>0.8</td>
<td>0.4</td>
<td>2.1</td>
<td>0.2</td>
<td>1.4</td>
<td>0.7</td>
<td>1.4</td>
<td>0.7</td>
</tr>
</tbody>
</table>
sources of GDP growth in the EU15, which has been slower than in the US or in the Nordics, have been different, as growth contributions are spread rather evenly between the different sources. After Finland, Sweden has the second lowest rate of accumulation of conventional capital, while the Danish figures are comparable to those of the US and many other European countries.

With regard to the growth rates of IT and non-IT capital services, it is seen (second panel) that both the Nordics and the US invested heavily in IT capital in the boom period 1995–1999, while in the period 2000–2004 IT capital growth slowed down. The Nordics do not stand out according to IT capital growth, even though they had significant contributions to growth from this source. The explanation is instead that these countries – like the US – already had accommodated a relatively high share of IT capital before the mid-1990s (the average share of income imputed to IT capital was around 5–6 per cent). As early users of IT capital, these countries benefited from the high-tech boom of the 1990s.

A decomposition of changes in total hours worked into changes in annual hours per worker (working time) and changes in the total number of employed workers (employment) sheds some additional light on the growth process (third panel). It indicates that some countries have experienced negative contributions from hours per worker as working times have progressively become shorter. Yet, for many countries there have been substantial positive contributions from the total number of employed workers, so that total labour input in terms of total hours has increased. In the period 1995–2000, this increase has been significant not only for the US but also for Finland and Sweden, which is largely explained by increased labour utilization of labour as these two countries recovered from their deep recessions. The increase in hours has been much smaller for the second period 2000–2004, mainly due to slow growth in the number of workers.
ENDNOTES

1 It is occasionally argued that the provision of child care and old age care by public authorities rather than within families implies a higher GDP, as it is measured, without “real” differences in amount of work or services provided. The argument is correct as far as it goes. However, one should not infer that the way care is organized does not matter, as complex efficiency and equity arguments need to be considered. On the arguments for “home production” see chapter 4.

2 Honkapohja et al. (2008) and Jonung and Hagberg (2005) provide a description and analysis of the Finnish and Swedish recessions of the early 1990s.

3 The data used in figures 3.1–3.3 are based on different sources which are not always mutually consistent. However, differences for individual countries have no bearing on the broad messages that those figures convey about the economic performance of the Nordics as compared to other countries.

4 IT production is defined as the sum of current value-added in industries for optical and electrical equipment, postal and telecommunications, and computers and related activities.

5 Diffusion of new technologies such as IT involve learning costs that decrease over time with the increasing number of users, and this process can be facilitated by a well-qualified labour force. The evidence of high educational attainment in the Nordics supports this conclusion as these countries are on the IT technology frontier.

6 An important question in education policies concerns the level of education at which improvements should be focused. The answer appears to depend on whether the country is close or far from the technology frontier (see Aghion and Howitt (2005)). If a country is close to the frontier, it should focus on improving the tertiary education systems. This is because high-technology innovations appear to require more advanced skills than lower-level innovations. It can be noted that the US does not stand out in the quality of secondary education but it is obviously well ahead of EU countries in the quality of its best universities. This is the part of the education system that matters the most for economic growth of the advanced countries.

7 The effects of deregulation work via intensified competition, which in turn leads to increased entry and exit. Recent evidence suggests that the growth effects of entry and exit depend on the industry, more precisely on the distance of the industry from the technology frontier. Industries that are close to the frontier can compete in the environment of intensified competition, whereas industries or sectors that are far behind cannot cope with it. Correspondingly, the exit of less efficient firms and replacement of them by new ones tends to have positive effects on economic growth.

8 A recent study by Dantas et al. (2006) has compared profitability of venture capital investment in Europe and in the US. Their findings are worrisome as European VC investments appear to be far less profitable than corresponding investment in the US. The results for Europe have not been decomposed by country, so that profitability of Nordic VC investment is not available separately. It would be important to analyze profitability of VC investment in the Nordic countries, with benchmarking against the US.

9 More particularly, the sub-indices in the four areas cover: 1) self-sufficiency (total employment rates, people in jobless households, average years of schooling, mean student performance), 2) equity (income inequality, relative poverty rate, child poverty, gender wage gap), 3) health (healthy life expectancy at birth, total life expectancy at birth, infant mortality, potential years of life lost) and 4) social cohesion (volunteering, victimization rate, prisoners, suicide rate).

10 The composite indicator is an aggregate and its composition can be put in question on many grounds. Other weighting schemes might give a different picture and a less favourable rating of the Nordic countries. For instance, Finns have a relatively high death rate from alcohol abuse as well as from homicide and suicide. It might indeed be argued that the OECD composite social indicator is just one possible measure rather than the definitive yardstick. However, there are many social indicators produced by international organizations (OECD, EU, WB, UN), and scanning these indicators of social equality and welfare (whether based on hard data or surveys) tends to confirm the impression of a high ranking of the Nordics.
These decompositions have been carried out on the basis of five-year averages and not annu-
ally; thus they are approximations. The data is from the Groningen Growth and Development
Centre, Total Economy Growth Accounting Database.

It can also partly reflect effects from improvements in labour and capital quality, since such
quality improvements are difficult to quantify and may not be fully incorporated into factor
shares and growth rates of the corresponding productive factors.

EEAG (2006), Chapter 3 provides a more detailed discussion of economic growth in the EU15
countries.

Capital services are measured using the methodology developed by Jorgenson and Griliches
(1967), in which growth rates of different types of capital are weighted using average shares of
each capital asset type in the value of the property compensation in terms of rental prices. See
Timmer, Ypma and van Ark (2003) for further details on the method of construction of the data.
The Nordic welfare model will face substantial financial pressure in the future, not least in the case of Finland. The main reason is that the population is greying. The number of elderly citizens is increasing at the same time as the work force is shrinking. The balance between those working and those not working will thus change dramatically, which in turn affects both labour markets and public finances. Public expenditures are projected to outpace revenues by a significant margin and this development raises serious challenges for current welfare arrangements. In short, the financial sustainability of the welfare state is at stake.

The worsening of public finances will take place automatically, simply as a consequence of maintaining current arrangements. Even relatively conservative estimates of future pressures on public spending suggest that the tax burden (tax revenues/GDP) would have to increase by several percentage points to close the sustainability gap in public finances. The magnitude of this challenge implies that the status quo is not a policy option. Moreover, the tax burden is already high and the tax system is under pressure from globalization. The policy option of raising taxes is therefore not appealing. Difficult policy choices have to be made to cut spending, to reduce benefit dependency and/or to increase employment rates. It is also worth stressing that the sooner reforms are undertaken, the less drastic will they have to be!
4.1 The Welfare State as a Social Contract

It is a hallmark of the Nordic welfare model that it offers both an elaborate social safety net as well as public services such as education and care (child and old age care, health care). Although there are various rules determining entitlements to these welfare provisions, it is a defining characteristic that ability to pay is not a criterion; the right to these provisions is universal in the sense that they are available to all citizens without being preconditioned on prior payments or contributions (see also chapter 2). These arrangements are financed by various forms of taxation, and there is no relation for the individual between tax payments and entitlements to services. (The same is not the case for most pensions and part of unemployment benefits.) However, at the aggregate level the tax revenues obviously have to cover expenses generated by the welfare arrangements.

This way of structuring the welfare society has the important consequence that benefits received and payments made by the average citizen differ strongly according to his/her age. The reason is simply that many arrangements of the welfare state serve to improve conditions for children (care and education) and the old (health care and pensions), while the contributions in the form of tax payments primarily accrue from income earned in the active years. Figure 4.1 shows the age-dependent net contribution of the average person to the public sector in Finland; that is, the difference between tax payments (of various kinds) and the value of transfers and individual services received.

The figure displays a clear pattern – the average person benefits from the welfare state in young and old age, and contributes in the years during which he or she is active in the labour market. It should be stressed that the figure shows only the average position for different age groups. Within age groups there are large variations: some have high incomes and rarely use public provisions like health care, while others have low income and poor health.

The relation depicted in the figure captures the “social contract” between generations, which is one of the backbones of the
welfare state. The essence of it is that those working finance, via their tax payments, the welfare provisions of the young and the old (and of other groups, such as the sick and unemployed). This can be interpreted as reflecting solidarity of those of working age, who contribute to the young and the old because they care about their living conditions. Alternatively, the social contract is supported by the perception of those of working age that they, if currently in need or in due time as they grow old, will be able to benefit from the same or similar welfare provisions. Expectations and trust are essential; those currently active agree to pay taxes because they trust that future active generations will do the same. The system is based on social cohesion in the sense of a perception that we are all, in one way or another, in the same boat.

The social contract has three key elements
1. Extent, coverage and quality of entitlements,
2. Level and structure of tax payments,
3. Labour force participation, including exit from and entry into the labour market.
The extent, coverage and quality of the entitlements depend on the ambitions of society for, e.g., education and health care, and with regard to when and how the social safety net should protect persons becoming unable to support themselves. The Nordic welfare model is characterized by the aspiration to offer service provisions that meet the requirements of most people; that is, the public sector is not a residual supplier of last resort for those unable to provide for themselves but rather something used by the majority of the population. All should have the same options for education – depending on ability and motivation – and health care – depending on need.

Likewise, the social safety net is supposed to offer a decent living standard, and it is not acceptable that individuals without self-support only attain a living standard very much lower than that of other groups. The ambition is to ensure equal opportunities irrespective of the ability to pay. While difficult to achieve, this egalitarian objective is a cornerstone of the Nordic welfare model.

Given the high ambitions with respect to the extent and quality of services and the social safety net, a large fraction of economic resources is in the Nordic countries allocated and distributed via the public sector. And since the welfare package is mainly financed by taxes, the tax burden (the ratio of total tax revenues to GDP) is high (see figure 4.2). This raises issues concerning the effects of taxes on economic decision making, since taxes cause a wedge between the social and private return to activities like education and work.

A high rate of labour force participation – reflecting working hours over the year as well as entry by the young and exit by the old from the labour market – is crucial for the Nordic model. The reason is straightforward: most outside the labour market are entitled to some form of transfer income, while only those with a job are contributing to the financing of the welfare state. The financial balance of the social contract is therefore undermined if too few are active in the labour market. An extended tax-financed welfare model necessarily has to rely on high employment. As already noted in chapter 3, the Nordic countries have indeed managed to achieve a high rate of labour force participation. In 2006, the average participation rate for the age group 15–65 was higher in
Demographics: from tail-wind to head-wind

Denmark and Sweden (at 76.9 and 74.5 per cent, respectively) than in any other country in the EU15. The rate in Finland (at 68.9 per cent) was lower than in the other members of the Nordic family but higher than in other EU15 countries except for the Netherlands and Austria. However, decomposing labour market participation by age (figure 4.3), Finland stands out by having a very high participation rate for prime age groups, but a low participation rate for the young (which to a large extent can be explained by education) and, in particular, for the elderly or those aged above 50 (due to early retirement in one form or another).

Two main challenges arise as a consequence of these characteristics of the Nordic welfare state. The first is the demographic challenge in the form of the change in the age composition

Two main challenges: the changing demographics and the provision of welfare services

Figure 4.2
Tax burden of OECD countries in 2006
* Figure is for 2005.

of the population resulting from a fall in fertility and an increase in longevity. The second may be termed the service challenge. The services provided by the public sector include a large share of labour-intensive human care, for which it is difficult to increase productivity without weakening quality. For instance, the quality of old-age care is assessed by how much time the personnel has available per old person. Moreover, needs and requirements tend to increase alongside other developments in society. Technology opens up new possibilities, notably, through advances in life sciences. Increases in material living standards give rise to new aspiration levels; the perception of a satisfactory quality of public provision of services is reassessed in the light of the development of income and other spending in the society. Hence, the demand for services may rise at the same time as they become more costly. In the following, these two challenges are discussed in turn; in this chapter we discuss the direct effects of demographic changes, and in the next chapter we turn to the service challenge.
4.2 Ageing – The Trend is Turning

A straightforward implication of the social contract shown in figure 4.1 is that the financial balance of the welfare state depends critically on the age composition of the population. There is no problem with the financial balance if there are few children and old relative to the working age population – then many are net payers and few are net recipients. Financial problems arise, however, if there are many children and old relative to the working age population, or few payers to support many recipients.

Historically, the welfare state expanded when there were “many to support few” in the sense that working age population was increasing relative to the number of children and the old. In contrast, the perspective for the future is now one in which “few will have to support many”. This may be illustrated by the so-called demographic dependency ratio, defined as the young (below age 15) and old (age above 65) relative to the age group in between (figure 4.4). The dependency ratio is in coming years going to increase significantly in the Nordic countries as well as elsewhere. In Finland the ratio has declined from the 1950s to the 1990s, but it is now starting to increase rapidly towards a new and much higher level. Most of the change reflects the increase is in the number of people aged 65 or more and will take place already within the next 10–20 years.

The age composition of the population is therefore going to change dramatically. For instance, according to the latest forecast from Statistics Finland, the proportion of persons older than 65 years will increase from the current 16 to 26 per cent by 2030. In addition, there is a “double ageing” in the sense that not only will the share of old people rise, but the share of the very old (those above 85) will increase even more (from currently 1.8 to 6.1 per cent in 2040). The share of young people below 15 will diminish from about 17 to 15.5 per cent in 2040. As a consequence of these two trends, the percentage of the working-age population (age between 15 and 65) will decrease from 66.5 to 57.5 per cent by 2040.

The demographic shifts are driven by two main factors. One is the so-called baby-boom effect created by high fertility rates in
The demographic dependency ratio – total – is defined as the age groups below 15 and above 64 relative to the age group 15–64, and the old-age dependency ratio is defined as the above 64 relative to the age group 15–64. Actual data 1940–2006, and Statistics Finland demographic projection for the period 2007–2040.

Source: Statistics Finland.

**Figure 4.4**
*Total and old-age dependency ratios, 1940–2040*

**Figure 4.5**
*Fertility rate, 1930–2006*

Source: Statistics Finland.
the late 1940s and the 1950s and the subsequent fall in fertility, cf. figures 4.5 and 4.6. As a consequence, large cohorts are approaching retirement while, at the same time, smaller generations are entering the labour market. Another factor is increasing longevity. Life expectancy has been on an upward trend, driven in recent years by the fall in mortality rates. In short, people live longer: while life expectancy for a newborn in 1970 was 70 years, it is today 79.4 years, and in 2040 it is expected to be 86.2 years.

4.3 AGEING PUTS THE PUBLIC SECTOR UNDER FINANCIAL PRESSURE

Combining the demographic trends with the social contract depicted in figure 4.1 yields a clear message. The balance between those contributing to and those benefiting from the welfare state is shifting to such an extent that the financial balance of the sys-
tem is seriously affected. Today, there is roughly one person older than 65 for 4 persons in the working age (or between 15 and 65), but in 2040 there will be almost two above 65 for 4 persons in the working age. That is, the old-age dependency ratio is almost going to double.

The “official” assessment of the financial consequence of these shifts is the one made by the Ministry of Finance (2006). Age-related expenditures (pensions, health care, long-term care, education and unemployment) are projected to increase by some 5 percentage points of GDP between now and 2050. Assuming an unchanged overall tax rate, the general government primary balance1 will deteriorate significantly, cf. figure 4.7. The projected situation is one of systematic budget deficits, and the situation is not sustainable (public debt would be growing to 120 per cent of GDP by 2050).

The size of the “sustainability gap” is measured by the ministry by the permanent improvement in the annual budget needed to ensure that the debt level in 2050 is the same as today. It turns out that the needed improvement of the general government financial balance corresponds to 1.5 per cent of GDP. The cyclically adjusted budget surplus would thus have to be significantly bigger than presently foreseen or projected. Achieving fiscal sustainability in the long run (well beyond 2050) would require a permanent strengthening of the budget more than twice of that size. Thus, fiscal sustainability will require a substantial improvement of public finances.

There are two important aspects to note about the message of figure 4.7. First, the precise numbers are not very interesting in themselves. Clearly there is uncertainty, and the more so the longer into the future the projections are extended. The relevant point is not the specific number but the proposition that systematic deficits are likely to emerge – and this conclusion is robust to a number of changes in the underlying assumptions of the calculations (see figure 4.7). Second, the calculations reported here are conservative: they only illustrate the consequences of given welfare arrangements and tax rates when the age composition of the population changes. It is implicitly assumed that there are no improvements in public services in the future – which is hardly a realistic assumption.
We will return to this issue in the next chapter. In short, current welfare arrangements are not financially sustainable, and figure 4.7 is interesting because it provides a frame for discussing some of the issues policy makers will have to address.

4.4 Fighting a Trend

Ensuring a high employment rate is crucial for the financing of the welfare state. This is particularly obvious for pay-as-you-go (PAYG) pension systems, in which the active population is financing the pensions of those retired out of contributions from current incomes. Such a system works well when the dependency ratio is decreasing, but it is problematic when the dependency ratio is increasing. Ageing poses an obvious financial threat, because more people live longer and because the employment ratio is likely to fall. One way of counteracting this would be for the retirement age to increase in parallel with increases in longevity (implying that the shares of life spent in and outside the labour market remain constant).
Historically, however, the share of life spent in the labour market has (until recently) been decreasing both due to later entry into the labour market and due to earlier withdrawal from the labour market, typically via early retirement schemes. This trend is sooner or later bound to resume if retirement ages remain unchanged while longevity is increasing. Preventing this from happening is clearly one of the steps needed to ensure the financial sustainability of the welfare state.

Much has been done in the Nordic countries to meet the pension challenge. In particular, the Swedish pension reform, introducing a “notionally defined contribution system”, is widely considered a benchmark. It promises a system that will remain financially sustainable without any increase in pension contributions from their present level. Denmark has recently taken steps to increase statutory ages for early retirement and public pensions. Once these changes have been implemented, the statutory ages will be tied to longevity. These measures address a large part but do not solve the sustainability problem driven by changing demographics. Finland is not as advanced in solving the problems; notably the earnings-related pension system of the private sector is unsustainable in the sense that it is likely to call for significant increases in the contribution rate in coming decades.

In recent years Finland has undertaken some reforms that affect pensions and retirement, though these reforms are not sufficient to solve the problems. The recent pension reform abolished some early retirement schemes and improved the incentives for prolonging work careers beyond the age of 63. It also introduced an adjustment mechanism linking pensions to longevity to the effect that pensions to be paid to a given age cohort are reduced if longevity increases. The latter is very important and implies that an increase in longevity combined with an unchanged retirement age would leave the individual with a lower annual benefit. In other words, the individual would have either to accept a lower (material) living standard or postpone retirement alongside the increase in longevity. If the individual postpones retirement in parallel with the increase in longevity, the benefits received will be unchanged. Although this contributes towards solving the problems arising from ageing, these measures are not sufficient. Moreover, from a
long-run perspective it is an anomaly that the statutory retirement ages (62, 63 and 68) are kept fixed while longevity increases.

There are several reasons why retirement may take place too early as seen from the perspective of society. First, taxation (in combination with various forms of means testing and supplements) implies that the return for continued work and later retirement is smaller for the individual than for the society even if the benefits are actuarially fair. The reason is that the labour income earned by postponing retirement is taxed (while leisure is not).

Second, even though indexation of benefits to longevity provides incentives for individuals to retire later when longevity increases, the system does not automatically ensure that this takes place. This is so since the statutory ages that apply to the various schemes are not indexed, and because individuals may underestimate longevity. Finally, with rising incomes there may be a preference shift with an increasing focus on leisure in the “third phase” of life.

Ageing is often perceived as an issue of pensions and retirement only. While these issues are important, one should stress that there are other financing concerns related to ageing. These include welfare provisions such as health and old age care. Financing the latter is also strongly dependent on the age composition of the population. More people – both relatively and absolutely (and particularly the very old) – will be in need of old age care and health services in the future. While increasing longevity is associated with more healthy ageing, there will nevertheless be an increasing pressure on health and old-age care if the old are in the future to have the same access to welfare services as currently. This requires more resources and raises financing issues beyond that of pensions.

4.5 EASY FIXES?

In the debate on the consequences of the ageing of society, it is often claimed that there are some easy solutions. Let us consider a few of these.
More children. Since the problem is the increasing share of old people in society, it is intuitively plausible that more children would be a straightforward solution. However, there are two reasons why this will not solve the problem. First, to eliminate the baby-boom effect, fertility should have increased years back, cf. figure 4.5; it is too late to rectify this problem now. Second, the newborns will also benefit from increased longevity, and hence in a lifetime perspective they will not be net contributors if current retirement ages remain unchanged. If the current system is not robust with respect to increasing longevity, it does not help to increase the number of newborns who will also enjoy increasing longevity. This is not to deny that there are both economic and non-economic reasons why more children and higher population growth are important for the society. However, higher fertility is not a solution to the financial problems arising from ageing.

Immigration. If it is too late to solve the problem by increasing fertility, could it not be rectified swiftly by immigration? It is correct that immigration of people in their 20s and 30s would contribute to flattening the rise in the dependency ratio. However, this will solve the economic problems only if the immigrants obtain a high labour-market attachment; to put it a bit bluntly, we are not looking for young people per se, but for workers who can contribute to financing our welfare system by paying taxes (rather than receiving benefits). It is not obvious that a country like Finland can induce immigration satisfying the latter condition on a very large scale. The potential for solving the problem via immigration may also been seen in light of the fact that in a medium-term perspective there is no “population surplus” in Eastern Europe; these countries are among the significantly ageing countries, and therefore large migration flows from these regions should arguably not be expected, cf. Carone (2005). The conclusion is again that more immigration may be desirable for various reasons but is not realistically to be perceived as a solution to the public finance problem at hand.

The others have a bigger problem. It is often argued that our demographic problems are not that bad since other countries, like those in Southern Europe, are facing even larger demographic shifts. This is a strange argument: why would problems faced by other countries contribute to solving the problems faced by the
Finnish welfare state? Actually the opposite may very well be the case. If countries with large demographic problems are late in reforming their systems, they may be a source of financial and economic instability with negative repercussions on other countries. If anything, it is better to have trading partners that either have smaller problems or are front-runners in reforms.

**Growth.** If the problem is that we have to support more old people, could the problem not be solved by a growth-oriented economic policy? In this way the pie would become larger, and perhaps we could then ensure the financial viability of the welfare system. Upon reflection, this turns out to be less obvious than it sounds. True enough, more growth will imply higher wages and incomes and thus also more tax revenues. This will indeed give more leeway in the public budget. However, the expenditure side will also be affected.

The public sector has basically two types of expenditures: wages paid to employees hired for the supply of various welfare services and transfers of one kind or another. Consider the following benchmark case in which we assume an unchanged supply of welfare services and an unchanged distribution profile in society. Under these two provisos, public expenditures will tend to grow by the growth rate of the pie.

To see this, note that public sector wages will have to increase by the same rate as wages in the private sector in order to maintain (in the medium term) the public-sector work force. Hence, this expenditure component increases by the same growth rate. Similarly, if recipients of transfers are going to gain from growth to the same extent as other groups in society, transfer expenditure will also grow at the same rate. Thus, more growth in the private sector will (roughly) raise the growth rate of public revenues and expenditures by equal magnitudes. It will not create any leeway in the public budget – under the assumption of unchanged service supply and distribution. Nothing is, of course, precluding a change in either of these two conditions. The point is that growth per se will not contribute to solving the financial problems unless policy makers decide or accept a decline in public-sector wages and/or transfers relative to private-sector wages.
Actually higher growth may make the financial problems of the welfare state worse. We return to discuss this paradoxical effect in detail in the next chapter.

There are thus no easy fixes to the financial problems driven by the demographic changes. This leaves basically three options: increase taxes, cut expenditures or increase employment. The option of increasing taxes is not only conditional on political support for such increases, but it also raises question about how tax increases would affect economic performance. The tax burden is already high and it is not clear that it is advisable to increase tax rates further. Expenditure cuts imply a retrenchment of the welfare state, and hence the sustainability problem of the welfare state is solved by making it shrink. This meets with political opposition and it would not qualify as a strategy for adjusting the welfare state to the new challenges – unless it is based more on increased efficiency than reduced entitlements. A further option could be to reduce benefit dependency and increase employment. Since a significant part of the problem is driven by increased longevity, it is natural to focus on measures to ensure that the effective or average retirement age increases.

4.6 Save or adjust?

The key challenge for the welfare state is that expenditures will outpace revenues for unchanged welfare arrangements due to the ageing of the population. However, although the demographic changes are approaching rapidly, there is still some time before they materialize fully. The issue of how to plan for the projected financial problems is, therefore, important.

One strategy would be to consolidate public finances in advance; to run a budget surplus in order to bring down public debt as soon as possible and eventually create a stock of public wealth, which can be used to finance the expenditure rise. Fiscal policies in recent years can be said to have followed this path, since the budget has been in surplus and public debt has been reduced. It makes sense to consolidate public finances when the debt level is relatively large and financial pressures are projected.
It is, however, neither advisable nor realistic to solve the entire problem by consolidation. This is so since the needed consolidation is large – of the order of magnitude of a permanent annual budget improvement of several per cent of GDP – and would thus require policy makers to run very big surpluses for a long sequence of years to cover expenditure rises in the very distant future. Figure 4.8 illustrates the implications of a consolidation strategy in which large budget surpluses are assumed not only for the next few years but continuing until around 2030 so as to ensure that (modest) deficits beyond 2030 can be financed.2

This is not a politically realistic path. It is unlikely that policy makers could pursue the tough fiscal policies required to raise the present (already sizeable) budget surplus by amounts corresponding to several percentage points of GDP for such a long sequence of years. The combination of the public sector building up a huge fund while citizens are increasingly insisting on increased welfare services would easily result in a political impasse. Moreover, it is important to distinguish between increases in the demographic

![Figure 4.8](image-url)
dependency ratio driven by the baby-boom effect and the increase in longevity. For the former, some consolidation makes sense; the possibility of redressing the change in fertility is bypassed and consolidation will imply that the consequences of the change in the dependency ratio are smoothened across generations. For longevity the case is different, since pre-funding would imply that current generations contribute to the financing of expenditure for future generations enjoying higher longevity. It is not obvious that this is fair. Hence, consolidation has to be combined with reforms that take the trend out of the public budget balance. This requires reforms that adapt the social contract to deal with the consequences of ageing.
ENDNOTES

1 The general government primary balance is equal to the total balance less net revenues from financial assets. As the pension funds are significantly bigger than government debt, the general government financial balance deteriorates more slowly than the primary balance.

2 The graph uses the figures for the primary balance (baseline) as projected by the Ministry of Finance (2006). That projection starts only in 2010, which is therefore the starting point also for figure 4.8. Recent data suggest an upward revision of estimates for the general government surplus for this and possibly the next year. However, the long run projection is geared to the cyclically adjusted balance and should remain unaffected by recent and temporary developments.
The provision of services is an essential element of the welfare state. The services include, inter alia, day-care, education (ranging from primary schooling to higher education), health care, and old-age care. The Nordic welfare model has the ambition of ensuring equal access to services for all according to need. The services are therefore mainly tax-financed and the standards offered should not only amount to a bare minimum but should meet the requirements of most people.

It is a major challenge to maintain the extended provision of tax-financed services in conditions of rising costs and increasing demand. We consider these issues in turn.

5.1 Services become more costly – the Baumol effect

Many forms of service production are special because of the crucial role of human interactions between the provider and user. This applies in particular to child-care, old-age care, health care, and education. Whereas productivity increases are possible and significant in most types of economic activities, they are difficult to achieve in face-to-face services. New techniques allow a farmer
to handle much bigger fields today, as compared to farmers in the past. Yet, the time it takes for a nurse to talk to the patient or for the staff in day-care institutions to play with the children is the same today as it was, say, 25 years ago. Time is essential for these services and they can therefore not be rationalized and productivity cannot be increased to the same extent as for traditional manufactured products.

As a rule of thumb, average productivity rises by about two per cent a year due to more effective means of production or new techniques and better machines. Real wages tend to grow over time at the rate of productivity growth and material living standards increase accordingly. However, as those performing service activities are to have the same wage increase as other groups and since the productivity of this group remains broadly unchanged, it follows that the relative price of producing these services goes up. The main implication is that time/human-intensive services tend to become more expensive over time (“Baumol’s law”).

The basic mechanism here is not dependent on whether the service is provided by a private or public supplier – it is the nature of the activity which is important. (This is not to deny that incentives and organizational structures, which may differ as between public and private provision, may also affect productivity, see chapter 8.) While the price of, say, mobile phones has fallen drastically due to technical advances, this has not happened for hair cuts. In the same way, it has not become cheaper to produce many public services – they are labour intensive and it is difficult to increase productivity while maintaining the same quality of the service. Rising costs will be reflected in higher prices paid by the customer or higher taxes paid by the citizen. Since the public sector is responsible for the provision of many such services, the public sector is facing a major financing challenge.

5.2 More is expected – the Wagner effect

Productivity increases and improvements in material well-being also release a demand effect. There is a tendency for the demand for services to increase when incomes rise. Once basic needs (food,
clothes, shelter etc.) are provided for, more attention is given to the satisfaction of other needs. Economists term this the “Wagner effect”, referring to a shift in demand alongside improvements in material living standards. The quality and extent of public service provisions are not given once and for all but follow other trends in society. Public services are expected to meet rising standards.

Again, the basic mechanism is present whether provision is private or public. Increases in demand are seen over a wide spectrum. Standards have increased for many privately provided services, and the same is happening for publicly provided services.1

Health care – a particular challenge
Health care is an important part of the publicly provided services, and an important area where the cost and demand effects outlined above are having significant consequences. Equally important is the fact that the opportunity frontier changes, thereby creating new treatment possibilities and hence new demands. This is particularly the case for health care, where we fortunately see significant advances in medical science. While these advances make some forms of treatments much easier and thus cheaper, they also shift the opportunity frontier and allow new and better treatments for diseases for which no treatments were earlier available. These advances bring important improvements in welfare, but they also create pressure on the health system to make the new (and more expensive) treatments and medicines widely accessible.

The effects of these tendencies are basically an empirical question, and the outcome will reflect both technical and organizational/political mechanisms. One issue is the scope for actually improving efficiency and productivity in the provision of welfare services. Another important consideration relates to how increasing demands should be accommodated. In any case, the Baumol and Wagner effects pose difficult challenges for the Nordic model, given its ambition to provide welfare services at a level which meets the needs and requirements of a large part of the population.

To illustrate this issue, table 5.1 reports the outcome from a recent OECD study of the challenges facing the health care systems in different countries, taking into account the effects discussed above. In the OECD analysis the new medical techniques...
and treatments as well as the relative cost increases are in focus, while the assumption on the income effect on service demand is moderate.

The table present two scenarios: “cost pressure” refers to the case where treatment costs rise more rapidly than income, while in the “cost containment” case this rise is assumed to moderate over time. The message of the table is clear. The rise of expenditure is significant for both health and long-term care even in the optimistic scenario, in which cost containment is assumed. For Finland there is an increase in spending from currently 6.2 per cent of GDP to 10.3 per cent — and if costs cannot be contained there will be a doubling.

The key point is that the service challenge for public finances is caused by the combination of the cost (Baumol) and demand (Wagner) effect. More is wanted of services at the same time as they are becoming relatively more expensive to provide. The reason why it is more difficult to address this problem for publicly than for privately provided services is the difference in the way in which demand and supply are brought into balance. For privately produced services it is a matter for the individuals themselves to decide whether they want to spend a larger share of their income on these services or not. For public services the choice is much less clear to the citizens since the services are provided free (or at a heavily subsidized price), and hence policy makers are left with

<table>
<thead>
<tr>
<th>Country</th>
<th>Health care</th>
<th>Long-term care</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2005 Cost</td>
<td>2050 Cost</td>
<td>2005</td>
</tr>
<tr>
<td></td>
<td>pressure</td>
<td>containment</td>
<td></td>
</tr>
<tr>
<td>Denmark</td>
<td>5.3</td>
<td>8.8</td>
<td>7.0</td>
</tr>
<tr>
<td>Finland</td>
<td>3.4</td>
<td>7.0</td>
<td>5.2</td>
</tr>
<tr>
<td>Norway</td>
<td>7.3</td>
<td>10.7</td>
<td>8.9</td>
</tr>
<tr>
<td>Sweden</td>
<td>5.3</td>
<td>8.5</td>
<td>6.7</td>
</tr>
<tr>
<td>OECD</td>
<td>5.7</td>
<td>9.6</td>
<td>7.7</td>
</tr>
</tbody>
</table>

the problem of how to define, provide and finance a “satisfactory” level of public services.

5.3 Preferences for leisure

The challenges do not stop here. At the same time as the services are straining public finances, we may actually choose to contribute less to their financing. This may sound paradoxical, but there is a simple explanation. With increasing material well-being it is to be expected that the demand for the non-material aspects of life will acquire an increased importance, that is, the demand for leisure goes up (shorter working hours, longer vacations, earlier retirement). This has happened in other countries and, historically, it has also happened in Finland. Average annual working times were 2005 hours in 1960 and 1624 hours in 2006 – people work fewer hours because they can afford it. This trend is no surprise – when material conditions improve, it is natural that people want to expand non-material activities. The trend is a challenge for the public sector since it tends to reduce the tax base – labour income is taxed, leisure is not! While individuals do not think of a decision to work less as a decision to pay less tax, this is nevertheless one of the consequences. When many people choose to have more leisure the tax base shrinks (see also chapter 6).

We thus have what may be termed a growth paradox – more growth may increase the demand for welfare services at the same time as it raises the costs of providing services and shrinks the base on which these activities are financed. The precise order of magnitudes of future increases in the demand for both improved and better welfare services as well as leisure are, of course, subject to uncertainty. However, the effects of an increase in leisure can easily be as large as the effects of the demographic shifts. Box 5.1 lays out in more detail why growth does not solve the financial problems faced by the welfare state, and why it may even worsen them.
5.4 **An easy fix – bring services back to the family?**

It is occasionally suggested that there is a straightforward solution to the challenge of providing and financing the services: bring them back to the family, i.e. let the children take care of their parents, and let the parents stay home to look after the kids. The reasoning seems to be that shifting the provision away from the public sector would eliminate the problem. This reasoning is erroneous in overlooking two important considerations.

First, it is the nature of the services that is the basic source of the problem, not the provider. Home production of services will also face the problem that they become relatively more expensive (the alternative is to work in the market, where the real wage is increasing), and that the demand for services is increasing alongside developments in society. To counteract this, home production would have to increase. But this would make both the labour supply and the tax base shrink and it would thereby add to the financial problem that the measure was intended to solve.

Second, for many services there are substantial economies of scale. As an example, consider day-care. Compare the case where four families each have one person staying at home to look after one child, to the case where one parent stays home to look after four children. In the latter case it is possible for three persons to be at work in the market economy, adding to production and thus material well-being. Exploiting this type of economies of scale is precisely what kindergartens and old-age care institutions are doing. With the public sector offering good opportunities for care of children and old people, it is possible to boost the labour supply, in particular of women. This is an important reason why the Nordic countries – despite their high tax rates – have achieved a high labour force participation rate (in particular of women). Hence, shifting care to private homes can have drastic implications for public finances – and not only because home work is not taxed while market work is.

This is not to deny that there is an important choice to be made with regard to what should be provided by the welfare state.
and what should be left to individual responsibilities. Public arrangements may have the consequence that individuals provide too little effort on their own part and have excessive expectations concerning what society can or should do to solve their problems. There is also a need to consider other aspects related to gender equality, family values and the socialization process when pondering whether certain activities should be within the family, the market or the public sector. The point here is only that the basic financial problem related to public service provision is not solved by shifting it back to the private sphere.

5.5 COMBINING THE SERVICE AND DEMOGRAPHIC CHALLENGES

The two challenges that we have considered – demographics and services – have different sources, but the problems are magnified by the fact that they both appear simultaneously. To assess the orders of magnitude of the overall challenge, let us return to the projection of public finances set out in chapter 4 above (in figure 4.7, reproduced in figure 5.2). The baseline in figure 5.2 basically shows the effects of changing demographics on public finances (revenue less expenditures). Let us modify the baseline by two additional scenarios:

(A) First, assume an increase in the overall growth in productivity by 0.5 percentage points per annum starting in 2005 and continuing up until 2050. As in box 5.1, it is assumed that the increase in productivity growth concerns only the private sector but not the provision of welfare services (the “Baumol” hypothesis).

(B) Assume, in addition to the better productivity development, that the volume growth of welfare services is 0.25 percentage points higher. This reflects our version of the “Wagner law”, according to which increasing income raises demand also for welfare services.

The results of these two scenarios are set out in figure 5.2. Scenario A is seen to make the budget deterioration less fast and
Box 5.1
Growth and the welfare state

It is argued in chapter 4 that growth is not a solution to the demographic challenge and in this chapter that growth may actually worsen the financial problems. These points are crucial and they are often neglected or not understood in policy debates. This box brings out the basic arguments underlying these statements.

Before explaining the effect of general growth (productivity increases) on public finances it should be noted what we are not saying. We are not contesting the importance of achieving strong economic growth, which is indeed the key to higher living standards in the future. Also, we are not discussing how the growth rate of the economy could be raised – which is clearly a complicated issue (discussed in chapter 3). Instead, we are just saying that economic growth, however desirable it may be for other reasons, is unlikely to resolve the financial dilemma of the welfare state that we see looming in coming decades.

Consider a situation where growth is driven by a higher rate of growth of productivity in the production of goods, while productivity is unchanged in the provi-

Figure 5.1
The welfare state and the growth dilemma
Budgetary effects of an increase in the growth of private sector productivity

- Rise in tax revenues
- Increase in public wage bill
- Increase in public transfers
- Increase in provision of welfare services
- Bigger tax base
- Rise in all wages
- Distributional constraint
- Higher incomes and higher demands
sion of welfare services. This is an assumption about technology (our version of the “Baumol hypothesis”), that we discussed above. The effects of more growth on the state of public finances can now be explained in simple terms with the help of figure 5.1.

First, higher growth means more output and incomes and thereby it leads to a bigger tax base and higher tax revenues (box A in figure 5.1). This is the effect that people have in mind when they claim that we should solve the public finance problem through more rapid economic growth.

Second, higher private sector productivity will raise real wages not only in the private sector but in the whole economy, including in the public sector (as a consequence of market forces and/or wage coordination by unions). The rise in the public sector wage bill increases public expenditure and absorbs part of the increase in tax revenues (box B in figure 5.1).

Third, public pensions and other transfers will fall relative to wages unless they are protected through indexation (to wages) or increased by discretionary decisions. Political pressure will normally prevent transfers from falling permanently behind general income developments. Assuming this distributional constraint to hold, public spending on transfers will absorb the rest of the increased tax revenues (box C in figure 5.1). Invoking the “Baumol hypothesis” (or the “Baumol disease”) and the distributional constraint prevents more growth from improving public finances.

Fourth, higher incomes are likely to increase the demand for services, including the demand for publicly provided welfare services. The income elasticity of demand is normally positive and for some of these services, such as health services, it is likely to be quite high. Growing incomes will therefore be associated with growing demand for welfare services and pressure on the government to increase their supply as well as to improve their quality. Again, more public spending is called for (box D in figure 5.1), though by now there remain no additional tax resources to draw upon. The likely overall result is therefore that more growth in itself leads to a deterioration rather than an improvement in public finances. It may help public finances only if public sector wages and/or transfers are allowed to fall behind general income developments.

A fifth consideration (not shown in the figure) is that higher incomes may increase the demand for leisure and reduce the amount of work supplied at a given (net) wage rate. The supply of labour will diminish since the income elasticity of demand for leisure is positive (and presumably sizeable), and the subsequent decline in employment will reduce the tax base.

To repeat, the preceding is not an argument against growth in itself. Growth is indeed important for material well-being, and it is important that productivity should continue to increase if Finland is to remain a high income country. The message of the box is rather that growth is not a solution to the financial problems that the welfare state is facing. Or to put it differently, policies boosting growth will not have a double dividend by both improving material well-being and ensuring sound public finances. More difficult policy choices have to be made to ensure the financial viability of the welfare state.
it implies that the long-run deficit of the primary balance is “only” about 3.5 per cent of GDP compared to 4.3 per cent in the base scenario. This result may seem to contradict our statement above that productivity growth is not a solution to the financial problems arising from ageing. However, the reduction in the deficit in scenario A arises as a consequence of the index clause in the Finnish system for earnings pensions, according to which pensions are adjusted by 80 per cent of the rise in consumer prices and 20 per cent of the rise in wages. Thus, an increase in productivity, which in the model is reflected in a corresponding increase in real wage growth, leads over time to a decline in pensions relative to wages. Real wages in this scenario therefore increase more than the real value of pensions, and the income distribution will change in favour of those in work. Hence, this scenario actually underlines the conclusion made above, which is that increased productivity growth is a solution to the financial problem of the welfare state only if all people are not allowed to benefit from the increase in the pie. This is a possible route for reducing the public deficit, though

![Graph](image)

**Figure 5.2**

*Growth and public finances in Finland, 2010–2050*

A = 0.5 % more productivity growth.
B = A + 0.25 % more welfare service growth.

Source: Ministry of Finance.
it is debatable whether such a development could continue for long without creating strong political pressure to restore a more “just” or “reasonable” parity between pensions and wages.

Scenario B shows that the joint effect of 0.25 per cent more volume growth in the provision of welfare services and 0.5 per cent more rapid growth of productivity amounts to a worsening of the primary balance, by an amount which is close to one per cent of GDP in the long run. Thus, a rather small increase in the growth rate for public services will have strong implications for public finances and add considerably to the financial sustainability problem. An increase in the volume growth of services of 0.5 per cent is rather moderate from a historical perspective; this scenario is by no means extreme but rather cautious in its assumption on the underlying expenditure pressure (cf. endnote 1 in chapter 4).

In summary, provision of services poses a challenge to the welfare state due to the combined effects of the rising costs of producing welfare services and the increasing demand for them. As noted above, the underlying forces do not depend on the way in which services are provided (though their manifestation will be different in the case of private as compare to public provision). The reason they become a particular challenge for the Nordic welfare state is that a large fraction of services are provided via the public sector and are tax-financed. Not only will the Baumol and Wagner effects as well as advances in medical services increase expenditure pressure, but improvements in material well-being will tend to undermine the financial basis for these services by reducing labour supply (as a consequence of increasing demand for leisure).

5.6 WHY NOT INCREASE TAXES?

Are tax increases the solution to these financial problems? Raising taxes may seem like a straightforward solution to a problem caused by an expenditure drift, itself driven by demographic shifts and increased costs of and higher demand for services. However, increasing taxes to solve the problem may, for several reasons, be a more problematic route than many people think.
The level of taxation is already high at the outset. Taxation is not only a question of whether the money should go to private or public pockets. Taxes affect incentives: economic agents must in most situations be expected to react to the reward for work that they receive after taxes and the prices they pay, including the tax components of these prices. This is the reason why some taxes – say environmental taxes – can be used to steer decisions in a direction which is considered favourable to the society. But it is also the reason why many economic decisions are likely to be adversely affected or distorted by taxes. In particular, the direct and indirect taxes levied on labour income will reduce labour supply; individual workers are induced to choose more leisure relative to consumption (and work), though it might well in the interest of society at large that people should work more.

The most relevant metric for understanding how taxes affect the labour market is the so-called tax wedge. The tax wedge is the difference that taxes make between what labour costs to employers, and what employees get in return for their work. To see this, consider a setting where an employer and employee have agreed on a given wage. The total cost to the employer is the wage plus eventual social security contributions (paid by the employer). The reward to the employee is the wage less eventual social security contributions (paid by the employer), direct taxes and indirect taxes. Both direct and indirect taxes have to be taken into account since they determine how much consumption the employee can get for the work effort – and consumption in its many forms (today or in the future) is the main motive to work. Hence, the total tax wedge is made up of social security contributions, direct income taxes and indirect income taxes. Figure 5.3 shows the tax wedge for different countries computed for a worker with average income.

For Finland the tax wedge is nearly 60 per cent (57.5 per cent), which is at the higher end in the OECD. To see why the tax wedge is a barrier to employment, consider a worker willing to work for a reward in terms of consumption equal to 100 units. The value of the production to an employer has to be at least 160 units, because it must cover both the compensation to the worker and the tax wedge. Consider an activity that yields an output of only 140 units, which is well above the compensation demanded by the worker.
In general, it would be worthwhile to undertake the activity, and without taxes this would take place; the employer would earn a profit of 40 and the worker would get a compensation of 100 (or they could share the surplus of 40 in some other way). But with a tax wedge of 60 per cent, the activity is either unprofitable for the employer or insufficiently rewarding for the employee (or both). The tax wedge prevents some activities from being undertaken (that would be worthwhile in the absence of taxation). The larger the tax wedge, the larger this effect is – increasing the tax wedge to, say, 65 per cent would imply that all activities yielding an output between 160 and 165 are no longer worthwhile.

Actually, an increase in the tax wedge from 60 to 65 per cent harms economic activity more than an increase from 40 to 45 per cent. The important message here is that taxation of income does not leave economic activity and total income unchanged – the greater the tax, the smaller the total income generated in the economy. Moreover, this effect is stronger the higher the level of taxation at the outset. This implies a difficult policy dilemma: incomes are taxed to finance the welfare state, but higher taxes make the cake shrink.
One may ask why this problem arises. If we all understand that taxes are needed to finance the welfare state we support, why is there a problem? The reason is that individual tax payments have no direct effect on the services the tax payer can access. This is precisely one of the defining characteristics of the Nordic model, namely that entitlements are unrelated to tax payment. Another way of expressing this is that the effect of one individual contributing a little more or less in taxes is negligible as it is shared with 5 million other inhabitants. However, when the whole population contributes less it adds up and has significant implications for total finances.

The effect of taxes on distortions therefore implies that it is not costless to levy taxes. The cost of raising one euro of public revenue is effectively larger than one euro. This is so since the cost includes both the direct effect of the euro going to the public sector, and the cost in terms of the economic activity squeezed out due to the tax. If a tax of one euro reduces incomes by, say, 20 cent, then the true cost of raising one euro to the public sector is euro 1.20; namely, the one euro paid directly and the indirect income loss of 20 cent. Available estimates are highly uncertain but suggest that the (marginal) cost of public funds for Finland and the other Nordic countries may indeed be much higher than the direct costs because of the increase in efficiency losses.5

A problematic aspect of taxation is that it makes the price of leisure lower to individuals than it is to society. An individual considering the option of enjoying more leisure (shorter working hours, more vacation, earlier retirement) will lose the net income after all taxes, or the consumption that the net wage would buy. To society the cost of leisure is the total income lost, including the tax revenue of the public sector. Hence, the tax wedge causes a difference between the cost of leisure to the individual and to society; leisure is less costly to the individual deciding on his or her leisure than it is to the society at large.

The above may seem to leave a puzzle for understanding the Nordic countries: if taxes are potentially so harmful, how come overall labour force participation is high, and how can these countries be among the richest countries in the world? There are many explanations for this (and yet the issue may not be fully understood).
One important reason is that tax distortions cannot be assessed independently of how the public money is spent. The money may contribute to expand incomes if it is spent on, say, education or day-care facilities, whereas this effect is smaller or absent if the money is spent on, say, cultural activities (even though there can be other good reasons to spend money on culture). Another issue is the role of institutions. Labour markets are or have been highly centralized and therefore key decisions on wages and working hours have not been taken by individuals but rather by central actors, who may well have taken into account that the price of leisure is higher to society than it is to the individual. (We will return to this issue in the next chapter.) Moreover, many policies have been designed so as to support the "work line"; various elements of the social safety net are conditional on the individual actively looking for a job, and workfare policies have the same aim.

As noted above, the costs or efficiency losses of taxes are an increasing function of their level. This has one very important implication. Even though it has been possible in the past to counteract some of the distortionary effects of taxation, it will be increasingly difficult to do so if the tax rates are raised. Hence, one cannot assess the effects of increasing taxes by simple looking at how taxes in the past have affected economic activity. Moreover, labour markets are also becoming more decentralized, and hence one of the important counteracting forces to the distortionary effects of taxes is becoming weaker.

Last but not least, globalization may also affect both the scope for taxation and the distortions. Tax-base mobility is increasing and may erode certain tax bases. (A partial response to this is to shift taxes to other less mobile tax bases, like real estate.) Second, even if people are not becoming more mobile, it is a fact that production and thus employment may more easily relocate than before. This implies that the negative consequences for economic activity of a high tax burden on labour are going to increase.

Needless to say, it is difficult to assess with any precision the consequences of higher taxes. However, the distortionary effects of taxes are almost certainly larger, the higher the tax rate. It is becoming increasingly difficult to counteract these distortions via labour market policies and centralized wage bargaining. And
globalization may contribute to both a direct revenue drag and an increase in tax distortions. Hence, relying on tax increases to solve financial problems in a situation where taxes are already high seems to be a very risky and potentially quite costly strategy.

The financial problems discussed here are those of a “mature” welfare state. In earlier decades the welfare state was expanded against a background of a demographic tail-wind (declining dependency ratio), initially low tax rates and a large potential for expanding the labour supply by bringing women into the labour market. The expansion of the welfare state has been made possible by expanding the tax base and increasing the tax burden. Figure 5.4 shows that the tax burden in Finland is today roughly the double of what it was 50 years ago. The tax base has been enlarged by increasing the labour force participation rate of women to a level very close to that of men, cf. figure 5.5. Since the late 1980s, the participation rates for the two sexes have moved closely in tandem. While one can discuss the options of reallocating the tax burden, it is difficult to avoid the assessment that the route of higher overall tax burdens no longer offers a realistic way of solving the future financial problems.

Figure 5.4
Tax burden, per cent of GDP, Finland 1955–2005
Data exists only for 1955, 1960 and 1965, and values for years in between are found by extrapolation.

Source: OECD.
financing problems. The policy choices are thus more difficult – as demographics have turned into a head-wind with an increasing dependency ratio and already high tax rates.

5.7 THE DIFFICULT ROAD: WHAT ARE THE REMEDIES TO THE SERVICE CHALLENGE?

The level and extent of public services are politically decided. It may therefore seem that the answer is political control; that is, politicians have to be tough and avoid accommodating demands to expand the level and quality of public services. It is an open question whether this is a tenable solution, even disregarding the question of whether such policy makers would ever be elected. Strict control will imply an increasing gap between the level and quality of services desired and those provided, and the public sector will soon be considered “old” and of “deficient standards”. This will violate the ambition of the welfare state to provide services meeting the requirements of most, and it is likely to induce those
able to pay to seek private solutions and many citizens to ask what they get in return for the taxes they pay. This may undermine the support for the welfare state.

One reason why the service dilemma arises is that the kind of services to be provided as well as their volume and quality are a matter of political decision making. There is no “natural” constraint on the desires and demands that citizens will formulate concerning their need for services – as these are offered free of charge (or at heavily subsidized prices) to the users. Introducing user payments is one means of providing policy makers with a tool to control and curtail demand. User payments are not a new thing in Finland; they already exist for child care and parts of old-age and health care. (However, user fees financed only 7.5 per cent of the social expenditure of local authorities in 2006 and this share has been on a declining trend.) There is scope for considering the possibilities of using this instrument more effectively or consistently. Nevertheless, user payments cannot be a major mode of financing if the ability to pay is not to become a main criterion determining eligibility.

There is the key issue of deciding which activities are to be included in the “public welfare package”, and which are to be left to individuals to cater for by themselves. One way of addressing the service challenge is to focus public provision on some core activities and ensure that they meet high requirements, and then leave other activities out of the package. That would mean that the public sector does less but ensures that the quality and availability of the core services meet the requirements of most people, leaving other matters for private solutions. This route will require strong political leadership.

Finally, the difficulties of increasing productivity for certain human-intensive types of services do not apply to all services. There are important cases of a lack of efficiency due to the way service provision is organized. There is significant scope for enhancing efficiency by improving incentives and organizational solutions. We will come back to this in chapter 8.
ENDNOTES

1 As an example, public expenditure on health and old-age care in Finland increased annually in the period 1993–2004 by 1.9 per cent on average. It has been estimated that 0.8 per cent was due to changes in the structure of the population (age and sex), while 1.1 per cent reflected enhanced quality. For the period 2000–2004 the corresponding figures were 3.5 per cent and 0.8 per cent, implying that the main part was not due to the change in the structure of the population but due to other factors. On this see Hujanen et al. (2006).

2 In its “cost-pressure” scenario the OECD assumes that expenditure, for a given demography, increases by 1 per cent more than income (which corresponds to the trend in the past two decades). In its “cost-containment” scenario it is assumed that policy can gradually eliminate this “extra” growth.

3 Increased growth could improve the public balance much more if it were assumed that other public transfers are given in nominal terms or are permanently indexed to consumer prices only (as is formally the case for, say, the flat rate basic pensions). However, historical experience suggests that transfers are increased by discretionary political decisions in a way which roughly corresponds to the outcome which would emerge with formal indexation to the development of wages. As suggested above, this may in the end hold also for the earnings pension system, but in the simulation it was assumed that the agreed (20/80) pension indexation formula is used permanently. Another element contributing to the reduced deficit is the fact that accrued pension rights in Finland are indexed with an (80/20) formula: 80 per cent based on wage developments, 20 per cent based on consumer prices. The simulations were done with the general equilibrium model (“FOG”) maintained at ETLA.

4 It is a familiar result of the theory of taxation that the efficiency costs caused by taxes are a non-linear (approximately quadratic) function of the tax wedge.

We argue that risk sharing and openness to globalization are two mutually reinforcing key strengths of the Nordic economies. Many attributes of the Nordic labour market can also be understood as forming part of a strategy of pooling risks while exploiting the opportunities of the global economy. For example, general industry-wide pay increases were a reasonably effective instrument for creating real wage flexibility in an era of “Taylorist” organization of industries, while at the same time promoting productivity growth via high investments and a process of Schumpeterian creative destruction. It is noteworthy that the main labour market organizations in the Nordic countries have embraced not only high employment but also technical progress and free trade. While powerful labour organizations have at times employed an anti-market rhetoric, they have not seriously jeopardized the objective of exploiting the global division of labour. Protectionism has been rejected by both labour market parties.

Nordic societies have been influenced by a strong “Weberian” work ethic. Their efforts in favour of gender equality have encouraged female labour supply with the help of, e.g., child care facilities and relatively generous child-related benefits. This has made it possible to combine work careers and childbearing also for women, which in turn has boosted labour supply and thereby employment and production. Furthermore, it is thanks to the fami-
ily policies that Nordic demographic projections look better than those of Southern European countries (in which childrearing at home has been more prevalent).

We thus see a lot of strengths in the Nordic labour market. However, many of the labour market institutions and policies that we currently observe were designed in the 1950s and 1960s, in an era when the welfare state, the productive technologies as well as the rules of the global economy were very different from what they are today. We believe that some of these institutions and policies, perhaps notably in Finland, are not in conformity anymore with what is required to achieve the basic “Nordic” objectives. Therefore, and in tune with our overall argument, our thesis is that the Nordic labour market model can remain successful only if it is thoroughly reformed.

A well functioning labour market is, needless to say, an indispensable precondition for favourable economic developments. Given the demographic transformation discussed in chapters 4 and 5 above, the labour force and employment constitute the key resource constraints of the economy. It is essential for the viability of the Nordic model that the amount of productive employment in the economy be high enough to meet the manpower demand of a large public service sector as well as to generate the tax base and revenues needed to pay for its expenditures, including the welfare services and pensions.

High employment requires well designed stabilization policies as well as structures and institutions that are conducive to low unemployment. The Nordic countries have traditionally been associated with ambitious employment policies, but their performance since the 1990s has been more ambivalent. For example, the labour markets in Sweden and Finland were subject to severe macroeconomic shocks in the 1970s and notably in the 1990s, and unemployment rates have not returned to the low levels of the 1950s and 1960s. The very low unemployment rates in those decades are probably partly to be seen as a consequence of the continuous expansion of the public sector.

A high level of employment and labour input requires:

1. a high aggregate supply of labour or a high rate of labour force participation;
2 a sufficient amount of average hours worked per employed person; and
3 a low rate of (structural) unemployment.

We will deal with these issues separately in subsequent sections.

**Box 6.1 What are Nordic labour markets made of?**

**Rate of unionization.** The rate of union membership, though it has recently declined somewhat, is higher in the Nordic countries than elsewhere. Negotiations between organizations have a significant influence on wage formation and working conditions.

**Uniform pay increases within industries.** Nordic pay bargaining was for a long time after WWII characterized by collectively agreed uniform pay increases – all members of a union would receive the same wage increase in relative (per cent) or absolute (units of money) terms.

**Inter-industry coordination.** The economy-wide rate of pay increase has often been determined in bargaining or consultations between central trade union federations and employer organizations. This has made it easier for unions to take into account the negative consequences of high wage claims for the economy as a whole (to “internalize” the “externalities”). It may also have made it more difficult to introduce flexible pay at the workplace, since national bargaining tends to focus on the size of wage increase as such and to neglect more sophisticated contract designs.

**Mutual consultation and interplay with macroeconomic policy.** The economy-wide coordination of pay bargaining has been facilitated by the government. Political decisionmakers have encouraged pay moderation by making tax adjustments conditional on the pace of contractual wage increases, particularly in Finland. In Sweden, however, government involvement in the wage bargaining has normally been rejected. In the period of high inflation – up until the 1980s – the consequences of comprehensive pay settlements, when undermining competitiveness, were often mitigated through soft exchange rate policies (devaluations). This way of supporting high employment was obviously unsustainable in the long run.

**“Solidaristic” pay bargaining.** The uniform wage increases in Sweden were originally motivated by the need to control inflation and limit local wage drift while enhancing productivity. The concern of the so called “Rehn–Meidner” model, launched in the 1950s, was to contain the excessive wage claims of workers in firms with above average profitability. A uniform pay increase was advocated as a solution, also on the grounds that it would promote productivity growth by enhancing the investment possibilities of firms with above average profitability (this was a time of credit rationing). A stronger form of solidarism was attempted in Sweden in the 1970s, when low wages were systematically raised more in
absolute and relative terms than high wages. This redistributive solidarism was subsequently abandoned, as it led to a revolt of businesses and professional employees and, finally, to the collapse of national coordination of wage bargaining in the 1980s.

Generous unemployment insurance schemes. In Sweden, Finland and Denmark, unions have assumed responsibility for operating unemployment insurance schemes, aided by tax-financed subsidies. This “Ghent system” has strengthened the unions, since access to unemployment insurance has been linked to union membership. In Norway, the Ghent system was never introduced and unemployment insurance has been undertaken by the state, which explains the lower Norwegian unionization rate. In Finland, after the introduction of unemployment insurance funds decoupled from the unions, the rate of unionization promptly shrunk from about 85 per cent to about 70 per cent. The average net unemployment benefit replacement rate in the Nordic countries is about 10 percentage points higher than in the euro area countries and about 20 percentage points higher than in the Anglo-Saxon countries (cf. table 2.1 in chapter 2).

Employment protection legislation. The Nordic countries differ with regard to the strictness of their employment protection legislation. On average, employment protection is less strict in the Nordic countries than on the Continent or in Southern Europe (cf. figure 2.1 in chapter 2). Sweden has probably the most restrictive labour laws, but that has not hindered Sweden from achieving an employment rate of about 80 per cent in 2007. Employment protection measures that make it harder for firms to dismiss employees have during the last two decades been relaxed in Finland.

Active labour market policy. The Nordic countries spend more than others on active labour market policies in the form of job intermediation as well as training and subsidized employment. One element of the Rehn–Meidner model of uniform wage increases was the idea of helping dislocated people to find new jobs and move to new regions and occupations, and Sweden has been the country with the largest expenditures on active labour markets policy measures. Active labour market policies in the form of workfare, i.e. a more stringent conditioning of benefits on job search or training, have gained popularity in recent years.

6.1 MAKE MORE PEOPLE WORK – THE EXTENSIVE MARGIN COUNTS!

Labour supply involves two important dimensions: the labour market participation rate of the different age groups and the average working hours of those who are employed. The former is referred to as the extensive margin (“what determines the choice of participating or not participating in the labour force?”) and the latter as the intensive margin (“how many hours does an employed person
Both margins are important, but there is an emerging consensus among researchers that the “extensive” margin is more important for policy purposes.

In other words, the effect of tax and social security parameters on the decision “shall I participate in the labour market?” is more important than the effects on the decision “how many hours shall I work, provided I have a job?”. The extensive margin is closely related to the age profile of individuals as well as their net contribution to the public sector. In terms of our figure 1.1 in chapter 1, the key policy issues become: how to encourage the inflow of young people into the labour force and how to contain the outflow of elderly people into retirement?

The importance of the extensive margin has only recently been appreciated in the scholarly literature and policy debate. Traditional labour supply analysis has been mainly concerned with the labour supply elasticity of those working, and found it to be low. The new strand of analysis, focusing on the extensive margin, is associated with significantly higher estimates of labour supply elasticities. This also leads to a different assessment of the role of taxes in inhibiting the supply of market work. The traditional textbook analysis of the choice of leisure versus work assumes that only the marginal tax rate (not the average tax rate) affects working hours. The new theoretical paradigm, by contrast, emphasizes the connection between average taxes and labour supply (taking also into account the possible withdrawal of social benefits). It turns out that the importance of the extensive margin gives rise to a much more significant distortion in the choice between leisure and work than most economists have hitherto assumed. These conclusions are reinforced by recent empirical research emphasizing the large participation response of certain subgroups of the population. In particular, the labour supply decisions of people at the lower end of the earnings distribution and of the young and the old (as well as of intersections of these groups, the low-skilled old and low-skilled young) may be influenced quite a lot by the design of tax, social protection and pensions systems.

Comparative data on participation rates suggest that a large part of the US-Europe gap in life cycle working hours is accounted for by different choices along the extensive margin, i.e. differences
in the participation decision of the young and the old as well as of women. Similarly, Kleven and Kreiner (2006) emphasize the extensive margin in their analysis of the efficiency losses associated with high tax rates. They find the negative effects on labour market participation (in the sense of “unemployment traps”) to be significant for the Nordic countries. The effects are large notably at the bottom of the productivity distribution, as a result of generous out-of-work benefits in combination with high tax rates on earned income.

On the other hand, labour force participation is high in the Nordic countries in spite of their large tax wedges. This suggests that other factors, such as labour market policies or high female employment rates, may counter the effects of high tax rates. To draw the conclusion that a large welfare state is incompatible with proper incentives for work may thus be premature. In our view, an equally plausible policy conclusion is that other means and policy instruments have to be used to compensate for the distortions caused by taxes. For example, a stronger “workfare” conditionality of social security benefits could be introduced. The entitlement to unemployment benefits can be made conditional on having worked full time and for a sufficient number of months or years. Also, the authorities might cancel benefits if the unemployed individual is not willing to consider job offers in other occupations or geographical areas.

Choices along these lines may seem politically unattractive in the Nordic political culture. However, we believe this is the direction that policy makers ultimately have to choose if the Nordic combination of high taxes and high employment is to be sustained. Indeed, such conditionality is not new in itself: there are already links between work and benefits and these probably partly explain the high supply of labour in the Nordic countries. However, we believe it is essential that policy makers should focus even more sharply on reducing the “thresholds” for work by those with a fragile attachment to the labour market. Particular attention should be directed to the participation decisions of the young, the elderly and those with low incomes. In Sweden, the government has recently introduced an earned income tax credit that reduced the marginal tax rates for workers with very low incomes significantly, while the
replacement rates of unemployment benefits were cut at the same time. Together, those reforms are expected to increase potential employment by about 1–1.5 percentage points.\footnote{8}

The effects of public policies – such as the tax and transfer system, the education system and the pension system – on the labour force participation decision of individuals is necessarily very complex. For example, the retirement policies of firms adjust in the course of time to the pension system. The important point, though, is that economic actors respond to incentives and labour market participation rates are influenced by tax and transfer schemes. Needless to say, incentives affect both employers and employees.\footnote{9} In all, we believe that increasing the labour market participation rates, in particular for the young and the elderly, is of primordial importance.

The achievements in Finland leave much to be desired in this respect. In particular, the activity rates and employment rates of older individuals (in age brackets 55 to 64 years) are lower than those of Sweden and Denmark (see tables 6.1 and 6.2 and also figure 4.3 in chapter 4). For the young (15 to 24 years), both Sweden and Finland perform poorly in comparison with Denmark. This poor record of activating and employing the young and the old is clearly one main reason for Finland’s relatively lacklustre (by Nordic standards) aggregate employment rate.

### Table 6.1
The employment rate, aggregate and by age groups, 2006

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Denmark</th>
<th>Finland</th>
<th>Sweden</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment rate (15 to 64 years)</td>
<td>77.4</td>
<td>69.3</td>
<td>73.1</td>
</tr>
<tr>
<td>Employment rate (15 to 24 years)</td>
<td>64.6</td>
<td>42.1</td>
<td>40.3</td>
</tr>
<tr>
<td>Employment rate (25 to 54 years)</td>
<td>86.1</td>
<td>82.4</td>
<td>84.7</td>
</tr>
<tr>
<td>Employment rate (55 to 64 years)</td>
<td>60.7</td>
<td>54.5</td>
<td>69.6</td>
</tr>
</tbody>
</table>

Employment rate = employed persons as a percentage of same age total population.

Source: Eurostat.
6.2 Work more hours, not less!

We have emphasized the key role of the “extensive margin”, i.e. of the decision of the individual to participate or not in the labour market. Needless to say, this does not mean that the intensive margin is irrelevant; it is also important that proper incentives be in place for people to work many hours. Policy makers are in this respect confronted with a challenge, since the historical evolution of working hours has displayed (until very recently) a clear downward trend. Conventional economics suggests that this is not surprising, since it is only to be expected that the demand for leisure increases along with rising income levels. After all, many consumer goods deliver their utility only if the consumer has at his/her disposal a sufficient amount of leisure.

It is not our purpose to preach some stringent moral responsibility of every individual to work hard. However, we believe that the basic challenge of sustaining work incentives has not really been understood by the Nordic electorates (or politicians). There is no problem with individuals deciding freely on how much to work and how many hours of leisure to enjoy – if the price of leisure for the individual, in the form of foregone earnings, reflects the “full” cost of leisure. Yet, as we have argued, the very fabric of Nordic welfare societies is likely to distort this choice in favour of leisure. It thereby creates a potential inconsistency and a problem of (lack

<table>
<thead>
<tr>
<th>Activity rate (15 to 64 years)</th>
<th>Denmark</th>
<th>Finland</th>
<th>Sweden</th>
</tr>
</thead>
<tbody>
<tr>
<td>80.6</td>
<td>75.2</td>
<td>78.8</td>
<td></td>
</tr>
<tr>
<td>Activity rate (15 to 24 years)</td>
<td>69.9</td>
<td>51.8</td>
<td>51.3</td>
</tr>
<tr>
<td>Activity rate (25 to 54 years)</td>
<td>88.9</td>
<td>87.8</td>
<td>89.4</td>
</tr>
<tr>
<td>Activity rate (55 to 64 years)</td>
<td>63.2</td>
<td>58.5</td>
<td>72.8</td>
</tr>
</tbody>
</table>

The activity rate = persons in the labour force as a percentage of same age total population.

Source: Eurostat.
Many institutions and policies in the Nordic countries distort the work-leisure choice of their citizens. There is a relatively good level of social security, protection of the environment, and a well-developed urban infrastructure. Also, there are generous government subsidies for, inter alia, public transport, housing, arts and culture. These public goods or heavily subsidized services are combined with high taxes on income from work, which tilts the choice of individuals in favour of (untaxed) leisure. The large scope of collective action and public goods means that life in the Nordic societies can be relatively “pleasant” even when the individual’s market income is low. This is not just a by-product of the Nordic policy package but reflects the very aim of social and other policies: extensive provision of public goods and social security are the means of insuring citizens against risks and avoiding extreme poverty.

In short, individuals are induced to work less than is desirable from a wider (societal) perspective. As taxes and some of the other causes of the distortions cannot be done away with, policy makers should use other instruments to compensate for these distortions (or to “distort” the labour supply choices of individuals in the opposite direction). Also, it should hardly be part of Nordic policy to subsidize programmes encouraging leisure-intensive careers for individuals that have already enjoyed a publicly subsidized education. Thus, policy makers should abolish unnecessary disincentives to work, such as “free years” or other schemes that discourage working.11

Another aspect of this externality has to do with collective agreements on shorter working hours. It is sometimes quite attractive for unions and employers in particular industries to agree on shorter working hours instead of higher wages and salaries. That may seem like a good idea for both the union and its counterpart. However, it should be appreciated that the agreement on shorter working hours has consequences for other workers, who go on working longer hours and pay more taxes to finance services consumed by all (the “common pool” problem).
Thus, responsible unions should resist shorter working hours in the name of worker solidarity. We argue below that decentralized and even individual pay bargaining is appropriate in a world of modern production techniques and globalization. Yet, working hours is an issue in which there is a strong case for coordination, and overall working hours should probably be dealt with and agreed mainly at a fairly centralized union-employer organizational level. Otherwise individual unions may have incentives to agree on shorter working hours without due regard to the social costs. As centralized or coordinated decision making is part of the Nordic labour markets setting, the framework exists to ensure that decisions on working hours take into account their wider implications.

It is a noteworthy fact that the Nordics have been able to sustain a rather high supply of working hours even though their tax rates are quite high. This is illustrated in figure 6.1, which shows average working hours in the EU15 and the size of total tax wedges (including income taxes, social security contributions and indirect taxes). Not surprisingly, there appears to be a
negative (and statistically significant) correlation between the tax wedge and hours worked. However, the relation is much weaker (and no longer statistically significant) when also the Nordics are considered. These countries appear as “outliers”; their amount of hours worked is higher than would be expected, given the high tax wedges. One plausible explanation for this observation is precisely the role that central labour market organizations have played for agreements on working hours, countervailing the individual disincentive to work. Another likely important factor is the role of family policies and women.

6.3 **UNEMPLOYMENT BENEFITS, WORKFARE AND ACTIVATION**

Good employment performance requires well designed labour market institutions and a well working system of wage bargaining. The next chapter will focus on the latter issue, here we discuss unemployment insurance and the role of labour market policies and activation schemes.

Insuring the individual against unemployment spells is an important part of the Nordic philosophy of risk sharing, and unemployment benefit schemes are accordingly relatively generous. Extensive theoretical and empirical research has in the last decades been devoted to the analysis of unemployment insurance schemes. Nothing in these research efforts suggests that it is fundamentally infeasible or inefficient to use unemployment insurance and thereby improve the well being of wage earners. However, the research also comes with a strong message: the devil is in the details, the detailed design of unemployment insurance schemes matters a lot.

The basic dilemma of unemployment insurance is the same as in all insurance systems: the existence of insurance affects the behaviour of the clients. Unemployment insurance may reduce job search efforts of the unemployed and raise the wage claims of those at work. These potential effects are an important issue in the Nordic countries, in which very large number of individu-
als take part in various unemployment insurance and activation schemes.

The main policy conclusions that emerge from the research literature are:

- A generous unemployment insurance scheme is not infeasible per se; unemployment spells need not imply poverty.
- However, there is a strong case for a decreasing time profile in benefit payments as well as an expiry date for their duration. In other words, insurance levels can initially be high, but they must shrink markedly as the unemployment spell is prolonged. A large amount of theoretical and empirical research suggests that the search effort of the individual intensifies as the time limit approaches and the benefit level shrinks. A fairly high initial benefit level can be compatible with efficiency, but it must also be preceded by a “self-insured” no-benefit period at the very beginning of an unemployment spell, so that transitions to unemployment in general and abuse of the insurance system in particular is discouraged.
- There is a strong case for active monitoring of the recipient’s search effort. Monitoring is costly, but stringent monitoring can sustain a more generous insurance system. Needless to say, the cost of monitoring can be kept down if the sanctions of getting caught are sufficiently severe.
- Similarly, the effects of workfare elements, in the sense of conditionality of benefits on training or activation schemes, can also be strong. Even if the productivity and direct return on activation schemes is poor, such schemes can act as a useful deterrent and selection device – an activation scheme or a training course makes unemployment a less attractive option for those not strongly engaged in job search.

With structural unemployment stuck at 6–7 per cent in Sweden and Finland, one clearly has to ask whether the unemployment insurance system is appropriate at present.

The introduction of uniform pay increases in Sweden in the 1950s went hand in hand with an active labour market policy in-
tended to help displaced workers find new jobs in expanding sectors of the economy. However, most of the large scale measures of active labour market policy since then have been ineffective and clearly a source of disappointment, particularly in Sweden. The policy measures may also have been subject to electoral cycles, since it is attractive for governments to hide a part of open unemployment temporarily into various training programmes and subsidized employment. In the 1990s, when Sweden was confronted with mass unemployment, active labour market policy measures increased hugely in volume.  

By and large, econometric evidence suggests that the labour market policy measures have had a disappointingly weak effect on unemployment. Training programmes and subsidized employment do have some effects that reduce open unemployment. The net effect on unemployment is weak or non-existent, however, because of direct crowding out effects and second round effects on wage claims. Direct crowding out occurs if the employer substitutes subsidized employment for their ordinary employees. Second round effects work via the wage formation process. An increase in labour market programmes will increase the wage claims of unions, thereby increasing structural unemployment. This will happen notably if it is attractive for a potentially unemployed individual to participate in a programme and the trade unions take this into account in their wage claims. It is then less painful for unions to push for higher wages, as part of the newly unemployed will be absorbed by the programmes.  

While the empirical evidence is somewhat inconclusive, the general result is that the effects of labour market policies on unemployment are quite weak. And when positive, the effects are at the expense of ordinary employment. Some studies have also found a positive effect on wage claims. The overall picture is therefore bleak. The Danish experience suggests, however, that labour market policy may play quite an important role in conjunction with other policies. In particular, labour market policy administration can encourage and even compel the individual to active job seeking. This seems to be one important aspect of the famous Danish “flexicurity model” (see the box 6.2), and the Swedish labour market administration has recently moved in that direction.
Although the overall return of active labour market policy investment is low, it may be high for some subgroups. In particular, any activation measures that have a positive effect on young groups can potentially be very productive, in particular if work histories exhibit strong path dependence. Preventing a young person from being marginalized can cost a lot and still be economically efficient. This consideration is particularly relevant for Finland, which among the Nordic countries has the lowest rate of labour force participation of the young.

More generally, the labour market performance of Finland leaves a lot to be desired in important respects. The mediocre employment performance (in a Nordic comparison) is arguably associated with a lack of political prioritization of the issue of high employment. The need to increase labour supply in response to the demographic challenge has not really penetrated the minds

---

**Box 6.2**

**What is the Danish “flexicurity model”?**

It is often argued that Denmark has been able to sustain high employment and keep unemployment low thanks to a combination of weak employment protection legislation and generous unemployment insurance. Andersen and Svarer (2007) demonstrate that this common perception is to some extent a myth. The combination of employment policy legislation and unemployment insurance was already in the 1980s quite similar to that of today, yet Denmark experienced high unemployment at that time. Furthermore, employment protection does not appear to be all that weak in international comparison, and the unemployment insurance scheme is in fact quite generous for the less skilled. What seems to have made the difference, really, is a general shift from income maintenance to ensuring job search and employment. For example, participation in activation measures does not anymore guarantee renewed eligibility for unemployment benefits. The effective duration of benefits has also been cut. Furthermore, the “workfare” element has been strengthened by the introduction of new measures that compel the individual to a more active job search, even at the threat of losing his/her benefits. Such workfare policies imply that the public employment service can ask the unemployed to accept a given employment opportunity. If the unemployed does not comply with the requirements, his/her unemployment insurance fund is notified and the fund can choose to sanction the individual in question by cancelling the benefit payment for a while. Although such sanctioning is not very often implemented in practice, Andersen and Svarer argue that the introduction of such workfare policies have made a difference. They also point out, however, that sanctions are quite costly to administer and that they affect different groups of individuals in different ways.

---

Even expensive activation measures may be efficient and justified, if they help avoid marginalization of young individuals.

Do voters and politicians in Finland give sufficient weight to high employment?
of politicians nor those of the voters. For instance, the debate leading to the parliamentary election of 2007 did never focus on that issue (in contrast to the political debate in the 2006 Swedish electoral campaign). Instead, the main electoral themes were purely redistributive ones. Yet, the demographic transition is going to be much faster in Finland than in Sweden and Denmark, and, as noted, labour force participation rates in Finland for the young and the elderly are clearly lower than Nordic averages.
ENDNOTES

1 In his history of the economic policy initiatives of the Swedish trade unions, Villy Bergström (2007) shows how committed the Swedish trade union federation LO was from the outset to technical progress and economic openness.

2 See Böckerman and Uusitalo (2006).

3 See Kleven and Kreiner (2006), a longer version of which is available as CEPR Working Paper 5594, April 2006.

4 Estimates of microeconomic labour supply normally imply low elasticities for individuals of prime working age who are already working. Intuitively, changes in the tax schedule change the slope of the individual’s budget line marginally, and the individual therefore adjusts his/her labour-leisure choice only marginally. In fact, hours-of-work elasticities, conditional on the person already working, turn out in many studies to be close to zero for prime age male individuals. It is well known that the labour supply of women is more elastic, but even in the case of women it is crucial for policy makers to affect the participation decision and not only the hours decision.

5 Theoretical modelling of the choice at the extensive margin typically assumes that there are significant fixed costs of participating in the labour market. This makes intuitive sense, since it is for many individuals quite impractical and costly to carry out a little amount of work only – for example, the individual has to travel to the workplace, it takes time to learn a new job, and the employer has to incur administrative costs also for part-time employees.

6 See Kleven and Kreiner (2006), who use micro data on taxes and benefits for the EU15 countries, Eissa and Liebman (1996), and Blundell and MaCurdy (1999).

7 Some calibrated theoretical models start to make sense of the large hours gap between Europe and the United States; see, in particular the calibrated model of labour supply over the life cycle by Rogerson and Wallenius (2007). The focus of their analysis is precisely on the life cycle pattern of labour supply: at which age will an individual start his/her productive career, and at which age is the individual likely to retire?

8 As estimated by the National Institute of Economic Research (Konjunkturinstitutet), Stockholm, (“The Swedish Economy”, December 2006).

9 For example, Uusitalo and Hakola (2001) show how the flow into early retirement in Finland depends on the incentive of both the employer and the employee to initiate such a move.


11 In Finland, there is a programme giving tax incentives for taking a year off work or a sabbatical year (“vuorotteluvapaa”); in Sweden a similar scheme (“friår”) has been used, though it was recently abolished by the Reinfeldt government.

12 See Peter Fredriksson and Bertil Holmlund (2006).

13 Sweden has established a research institute (IFAU, Institut för arbetsmarknadspolitisk utvärdering) that carries out sophisticated evaluations of active labour market policy programmes.

14 See Forslund and Holmlund (2003).

15 However, there is also an effect in the opposite direction by these programmes: participation may improve the individual’s attachment to the labour market and strengthen his/her individual competitiveness as an employee – because of, say, newly acquired skills. This could modify the wage claims of unions, as they know that any newly unemployed member will encounter harder competition from part of those currently unemployed. It may also be noted that some studies have used data on individual labour market careers to analyse the effects of programme participation on the probability of getting a job. Even those effects turn out to be very weak or even of the wrong sign. For example, Fredriksson and Johansson (2003) find that the participation in job creation or training programmes reduces the individual’s chance of finding a job.

16 See Forslund and Holmlund (2003).

17 See also Fredriksson and Holmlund (2003, 2006) who argue that the case for imposing a penalty on less active job search is theoretically solid.
Equilibrium unemployment depends, in heavily unionized economies, on both the demand for labour by employers and the level of the wage claims of unions. Powerful unions can have significant effects on wage claims and hence unemployment; they are in a position to extract wage settlements that disrupt the macroeconomic balance. It is a constant challenge to enhance or impose wage moderation in order to keep wage claims at a level compatible with low unemployment. This is an important point, since some of the negative consequences of rigid labour market institutions may be limited if wage demands of unions are sufficiently moderate.

In the late 1980s, co-ordination of wage bargaining became the subject of a large body of theoretical models, starting with the well known contribution of Calmfors and Driffield (1988). One conclusion was that centralized pay bargaining is conducive to high employment and low unemployment in heavily unionized economies. Nationally coordinated pay settlements are an advantage because they make it possible to take into account the negative consequences of high wage claims of individual unions and to contain union rivalry. This discussion reinforced the legitimacy of centralized pay bargaining and underlined the challenge of achieving wage moderation.

Achieving full employment may indeed necessitate some kind or degree of cooperation between unions. This requirement is
particularly noteworthy in a euro area member state like Finland, since there is no national monetary authority reacting to the wage setting behaviour of the unions. In Sweden, for instance, large unions know that high pay increases will be met by high interest rates. In a small euro area member state, by contrast, there is no central bank fulfilling that role, which means that inter-union coordination may be desirable as a means of achieving some moderation of wage claims.

7.1 **Uniform Pay Increases: For and Against**

We do not contest the need for macroeconomic pay moderation in unionized economies, nor do we question the potential usefulness of collective agreements. Collective pay increases may function as a crude mechanism for creating some wage flexibility in a small and open economy vulnerable to external shocks (such as fluctuations in the foreign demand for exports). Instead of requiring wages to be renegotiated separately in every firm, the Nordic labour market parties have sought to enhance the necessary process by establishing a collective adjustment mechanism. Also, investment incentives are better if the firm can expect that the profits arising from enhanced local productivity – achieved with the help of, for example, new machinery – will not be expropriated by the local union. This is precisely what Nordic collective agreements traditionally achieve: they always prohibit local strikes or lockouts, and they externalize the pay increase decision to higher level organizations. They thereby prevent local rent seeking and strengthen the incentives for investment.

Furthermore, the union and employer association representatives can adjust the collectively agreed pay increase to the business cycle position of the industry as a whole and thereby allow downturns to be met with lower pay growth (and upturns with a higher one). In Finland, which has an industrial structure less diversified than Denmark and Sweden, such an “incomes policy” system with nationally coordinated and uniform pay increases...
worked reasonably well for a long time. The large increase in both output and productivity in the electronics industry from the mid-1990s onwards was enhanced by a Rehn–Meidner type of incomes policy, which supported investment and expansion in high tech firms with good profitability.

We suspect that the need for industry-wide adjustment mechanisms is far weaker today than it was in the early post-WWII decades. The system of uniform and moderate pay increases may well have suited volatile export industries in small countries in the era of a Taylorist organization of production (into many rather similar tasks). In the global economy of today, by contrast, shocks and structural transformations are increasingly firm-specific or even task-specific – not national or sectoral. Firms can outsource many parts of their production, and outsourcing of tasks is increasingly a vital competitive instrument. A general pay agreement for an entire industry is too blunt a tool for controlling costs in such circumstances. If a particular operation is threatened by outsourcing, it does not make sense to cut all the wages in the entire firm or industry – in the way it once made sense to moderate all costs of paper mills if the price of paper declined. Successful Nordic firms must be able to seek productivity increases via outsourcing and reorganization of production.5 Inevitably, global firms will need to operate their own pay and personnel policies with due regard to the increasingly global market.

Moreover, production techniques have evolved in ways that increase the importance of individual incentives as compared to direct control and monitoring. In Taylorist industrial production it made sense to tie pay to particular tasks and to do that in collective agreements. In the Taylorist era, there were many similar tasks within firms and it was easier than it is now to monitor and measure the performance of employees. In modern production conditions, the performance of individuals and groups is often harder to assess. Remuneration should be based on a variety of performance indicators, and remuneration schemes should be tailored with regard to the tasks and the personnel at hand. It makes far less sense to regulate final wage outcomes in collective agreements.
7.2 Coordination and Decentralization of Wage Formation

Our view is that macroeconomic moderation of wages should in no way preclude a more decentralized or individual wage setting. Indeed, this is the trend that has been observed in Denmark and to some extent also in Sweden. Starting from a tradition of uniform pay increases, pay bargaining has been comprehensively individualized in large parts of the Swedish and Danish labour markets. This has not implied a rejection of collective agreements. Individualization has taken place within the framework of collective agreements: many Swedish and almost all Danish collective agreements avoid imposing a general pay increase on all firms and individuals. Instead, they just impose industrial peace and rules stating that wages should be decided upon in local discussions, possibly with some (low) guaranteed individual increase.

The model with general and undifferentiated pay increases, the level of which is subject to national co-ordination, has been quite long-lived in Finland. Central coordination may have been enhanced politically by Finland’s membership in the euro area, since wage moderation has in these conditions to be achieved without a national monetary authority that would discipline wage setters. Many Finnish unions strive for similar pay increases for their members, and this implies that relative wage differentials are rigid. Overall wage dispersion as well as wage dispersion within tasks is accordingly low. However, the need for macroeconomic control of wage developments has been unnecessarily interpreted as an argument against pay differentiation. Changing technologies strengthen the case for reconsidering pay policies. Employers have indeed become increasingly unwilling to go on with pay settlements that do not leave room for firm-specific pay outcomes and individually differentiated pay increases.

Developments in Finland contrast with those in Sweden, where central bargaining of pay increases was abolished after the ambitious solidarism in the 1960s and 1970s had undermined the willingness of employers and professional employees to cooperate with the LO. From the mid-1990s onwards, a new pay bargaining
routine emerged, relying on informal coordination of pay claims by sectoral bargaining cartels. Co-ordination is facilitated by a new government authority, the National Mediation Office, which provides the labour markets organizations with wage statistics and descriptions of current collective agreements. White collar and professional unions have become increasingly willing to conclude pay agreements that leave the final determination of pay to individual negotiations at the workplace. At most, such contracts set a low minimum level of pay increases. Only a minority of employees in both the business and the public sector are covered by collective and general pay increases, and almost all professional employees conduct completely individual wage discussions with their employers. There is a great variety of contractual forms; some collective agreements just stipulate a peace clause or at most an “individual guarantee” of a minimum pay increase, remaining completely silent on the distribution of pay increases between individuals.

The contrast is even starker between Finland and Denmark, where the role of collective agreements has increasingly been confined to the regulation of working hours, pensions, sickness and vacation issues. Thus, most private sector employees in Denmark now negotiate their pay directly with their employer, subject to a peace clause. The decentralization of pay bargaining in Sweden and Denmark has broadly coincided with increasing wage differentials between firms, in particular among white collar employees. In other words, the individual’s level of pay depends less and less on his/her observable characteristics and more and more on the firm or establishment where he/she works. This is a general trend, which is visible also in Finnish earnings data, but the changes are more significant in Denmark and Sweden. As expected, the dispersion of wage changes across individuals is in Finland and Sweden clearly lower than in Denmark (the dispersion also in Denmark remaining clearly smaller than in, say, the US).

The change in firm-specific pay differentials can be related to institutional changes. In a recent report on Swedish wage formation, a clear correlation is reported between more individual contracts and changes in wage and salary distributions for many industrial sectors. However, the evolution of pay differentials...
also depends on the business cycle. In general, salary differentials increase in booms if collective contracts allow it. In recessions, by contrast, the earnings distribution is stable. Thus, it seems that firms reward some of their key employees in periods of high growth.

At the same time, wage drift has been quite low in Sweden. The Swedish experience suggests strongly that it is possible to establish wage moderation in a strongly unionized economy without imposing uniform pay increases for all individuals. In fact, more individual pay bargaining has probably limited the rate of general wage drift, since individual wage determination makes it possible for employers to adjust relative wages with lower aggregate pay increases, as a part of the regular bargaining process. If the collective agreements leave a lot of room for relative wage adjustments at the local level, it is less likely that wage drift in excess of collectively agreed increases will emerge. There need thus be no contradiction between macroeconomic objectives and more individual and firm-specific pay bargaining.

Opposition to more individual wage settlements in Finland often stems from a fear of an explosive increase in wage differentials. It is apparently assumed that the labour market institutions in the Nordic countries keep pay differentials (artificially) low. This conventional perception may be true to some extent, but we would not expect a very large increase in wage differentials even if pay bargaining were further individualized. There are several reasons for this. First, it is doubtful whether collective regulation could in the long term sustain a distribution of individual wages that deviates dramatically from the competitive wage structure. Second, the Nordic countries are well known for the equality of their educational opportunities and the absence of educational tracking in primary school. Thus, the relatively small wage differentials also reflect a relatively even distribution of productive abilities11.

Empirical evidence for Sweden suggests that the effect of individualization of pay bargaining on earnings differentials is rather gentle. Most groups of salaried white-collar employees in Sweden moved into individual pay determination around the years 1997–1999. This was reflected in an increase in wage dispersion,
Figure 7.1
The evolution of wage differentials in Sweden, 1968–2004
Measures of wage dispersion (P90/P10, P90/P50, P50/P10) for all wage earners.

Figure 7.2
Dispersion measure P90/P10 for blue collar workers and salaried employees.
but not in any dramatic way (cf. figure 7.1). In particular, if the pay structures were initially very compressed, one would expect a large increase in the wage dispersion of salaried employees. Such an increase is discernible (see figure 7.2) but it is rather modest, in particular when compared to the large decrease in wage differentials that took place in the 1970s.

Finally, and as pointed out above, the Swedish experience also suggests that more individual pay bargaining leads to higher earnings for key employees in periods of high economic growth, without leading to any general downward bidding of wages (in good or bad times).

### 7.3 Wage Formation and Productivity

The role of decentralized wage formation for economic developments should not be exaggerated. It is unlikely to boost growth significantly or resolve the difficulties of the welfare state. However, individualized pay formation can still contribute to both a better allocation of resources in the economy as a whole and to more efficiency in the provision of services. In particular, it may enhance productivity in the public sector and thereby alleviate somewhat one of the key problems highlighted in this report (cf. chapters 5 and 8).

Since public sector productivity measures are poor, there is not much data to test this hypothesis. There are econometric results, however, that lend support to the idea that labour productivity responds positively to individual incentives, at least in the business sector. Some recent studies have investigated the relationship between pay individualization and productivity growth in Sweden, exploiting the fact that an encompassing individualization of pay bargaining took place from the late 1990s onwards. The evidence is scarce so far, but it suggests that the shift to more individual wage bargaining has been associated with higher labour productivity growth. If available results can be generalized to public sector employment – and this is not an implausible conjecture – they provide an important argument for reforming public sector wage determination.
It should be also pointed out that productivity growth in the business sector has in recent years been quite high in both Sweden and Finland (see chapter 3). In Finland this is very much driven by the IT sector, in which collective agreements have since the 1980s allowed for an evaluation of individual performance as the basis of wage and salary determination.

With the prevalence of uniform pay increases in Finland, and to some extent in other Nordic countries, we would expect econometric analyses to indicate high wage rigidity (particularly in Finland). International comparisons of wage flexibility indeed support the view that Finland – and also Sweden, though it has gone further in liberalising its wage bargaining system – may suffer from excessive wage rigidity.

Flexibility and rigidity of wages involve many dimensions. Real wage flexibility at the macroeconomic level refers to the interaction between unemployment and average real wages. Full employment can be restored quickly if the labour market is flexible, since an increase in unemployment then exerts strong downward pressure on the level or rate of change of real wages. Relative wage flexibility refers to the ability of the economy to generate adjustments in relative wages when needed. For example, as new industries emerge and old ones disappear, changes in relative wages may help the reallocation of labour and provide proper incentives for individuals to change jobs. The internal pay policies of firms and incentive schemes may also require changes in relative wages between groups and individuals. Finally, nominal wage flexibility refers to the ability of the economy to generate nominal pay cuts when needed in some firms or in exceptional circumstances.

Nominal and real wage flexibility has in recent years been highlighted in a number of comparative international studies. In general, all countries exhibit some rigidity, and nominal and real wage rigidity should not only be attributed to collective regulations. There is also considerable uncertainty as to how correctly individual pay changes are measured, since most data sets contain some errors. However, it is noteworthy that Finland and Sweden stand out in one major study as the two countries with the highest degree of real wage rigidity and with nominal wage rigidity well above the average (though it may also be noted that the US
displays higher nominal rigidity than both Sweden and Finland). The rigidity measures for Denmark, by contrast, are amongst the lowest in the entire comparative data set. Measurement errors notwithstanding, Finnish and Swedish collective agreements seem to be particularly effective in protecting the real earnings of workers who stay with their current employer.

7.4 TAKING STOCK – SOME CONCLUSIONS

As we have seen, the Nordic labour market experiences are a mixed bag. When compared with the lacklustre EU labour market performance, the Nordic countries stand out rather positively. It is also positive that labour market parties have been able to learn from experience and reform their practices. In Denmark, wage settlements have become almost completely individualized. In Sweden as well, individual pay bargaining has proceeded quite far. Dead end policies like a redistributive solidaristic wage system have been abandoned, and the political system has reacted to the need for boosting employment and the labour supply. As noted in chapter 6, this is the case for Denmark and Sweden, less so for Finland.

As to pay bargaining, we believe there is an unnecessarily stark opposition in Finland to more individual wage settlements. The Swedish experience, as well as basic economic reasoning, suggests that there are many ways of combining flexible wage determination with both (some degree of) income security and macroeconomic objectives. Wage determination in the Nordic countries could in our view be quite market-driven, as there are many other mechanisms in place to compensate for economic risks. And as noted, both Denmark and Sweden have already proceeded quite far in the direction of individualization of wage bargaining.

The transition in Sweden, which is otherwise known for its political sensitivity vis-à-vis earnings differentials, is noteworthy. It probably reflects the fact that there is now in place a fully fledged welfare state to protect the worker against the most severe economic risks, thereby reducing the uncertainties that wage earners have to face. In such circumstances it is much less threatening to
allow market forces and the personnel policy of firms to influence individual pay. Furthermore, inasmuch as voters desire redistribution (as they clearly do in all Nordic countries), the welfare state now operates a large redistributive mechanism. It thus makes less sense to try to use the system of wage formation for redistributive purposes.

Also, and as compared to the 1950s when collective pay bargaining was established, the macroeconomic framework is now much more stable. When the macroeconomic environment is stable and inflation is low, the individual worker may feel much less need to ensure a decent pay increase by collective action. Compare this state of affairs to the 1970s when inflation was around 10 percent – in those circumstances it might have seemed a good idea to ask the union to ensure that unanticipated inflation is matched by corresponding pay increases.

In summary, we believe that a successful political reform programme should build on the strengths of the Nordic model. It is because of sound macroeconomics policies and social insurance that Nordic labour markets can do without stringent employment protection legislation and cope with individual pay bargaining. By the same token, a successful political reform programme should acknowledge the basic strengths of the Nordic model and not try to reform all things at once. Opposition in trade unions is easily triggered by the suspicions that reformers want to abolish everything: unemployment benefits, pensions, public services, collective agreements.

Incremental reforms make sense in our view. It should be possible to design wage bargaining systems that allow firms to operate flexible wage policies, also in Finland. It should be possible to sustain social insurance and tax systems that alleviate individual economic uncertainty, while keeping work incentives sufficiently strong. If economic reform in countries like Finland and Sweden is to gather political support, voters and unions must be persuaded that the goal of reform is not to dismantle the entire edifice of Nordic institutions, but rather to design schemes that reduce deadweight losses. The Nordic labour market model and collective agreements are not the issue: the challenge is more of a political nature. Many characteristics of the Nordic labour market
model stem from an age in which the political mobilization of the workers sought to generate a collective will of the working class to overcome powerful opponents and notably the owners of capital. Today, the main challenge arises from the need to control internal free riding. This calls for another kind of political discourse, much less adversarial in nature.

While there is need for further reform, we believe that the Nordic societies should exploit the strengths of their own model. We do have strong trade unions – they could help coordinate agreements on working hours with a view to keeping them sufficiently high? We have progressive taxation as well as comprehensive social security and generous unemployment insurance – why not liberalize employment protection legislation further and allow wage settlements to better reflect market forces? We appreciate hard work and regard high employment as a precondition for the attainment of economic and social objectives – why not establish a stronger workfare? These are the questions that Nordic electorates and decision makers should and must address in coming years, and it is not a service to anybody to pretend that hard choices do not exist or can be avoided.
**ENDNOTES**

1 The modern theory of equilibrium unemployment makes unemployment a function of the wage claims of unions: there is a mapping from the level of employment to the desired level of wages, and it is the position of this “wage claim curve” that determines the NAIRU, i.e. the level of unemployment that is compatible with stable inflation.

2 Calmfors and Driffill (1988).

3 Holden (2005) fleshes out the theoretical argument.

4 Hartog and Teulings (1998) present a sophisticated analysis of Dutch pay bargaining from this perspective, but their analysis fits the Nordic countries’ labour markets equally well.

5 The paper by Baldwin (2006) is an elaboration of this new paradigm of industrial organization.

6 To compensate for this, profit-sharing schemes and performance pay schemes have become increasingly popular among white collar employees.

7 In 2007, the Finnish metal and technology employer associations and some of their wage earner counterparts broke new ground by concluding agreements that leave a large part of pay increases to firm-level negotiations.

8 For Sweden, this is reported by Edin, Holmlund and Skans (2007), and for Denmark, by Westergaard-Nielsen and Tor Eriksson (2007). Similar trends are reported for Finnish white collar employees by Uusitalo and Vartiainen (2007), although overall salary differentials are lower in Finland.

9 See Uusitalo and Vartiainen (2007).


11 In general, though, economic theory suggests that the distribution of market pay displays a higher variance than the distribution of productive abilities. An early demonstration of this was provided by the celebrated Roy model, see Sattinger (1993).

12 In a study exploiting a large data set of individuals matched with information on the firms in which the individuals were employed, Per Lundborg (2005) was able to show that productivity (value added per employee) had increased more rapidly in those firms within which intra-occupational pay dispersion had increased the most. In another study with a similar matched data set, Fredrik Heyman (2005) showed that profits are enhanced by increased wage dispersion within the group of highly paid salaried employees.

13 The International Wage Flexibility Project (see Dickens & et al., 2006) compared large data sets of individual wages for “job stayers” – i.e. individuals who do not change employers – between two consecutive years. The research strategy was to look for nominal wage rigidity by analysing the shape of the statistical distribution of individual wage changes in particular countries and particular years. If the statistical distribution of pay changes contains a lot of observations just around or above a zero increase, that would be interpreted as evidence for nominal rigidity, because a large amount of nominal pay cuts would then in all likelihood have been prevented by some rigidity mechanism. If there were a large concentration of observations just around the rate of inflation, that would be evidence of real rigidity, since a number of real wage cuts would in all likelihood have been prevented.

14 There are many reasons for wage rigidity emerging even without any collective regulations. For example, most wage contracts are written in nominal terms and many are quite long term. Many workers resist pay cuts, and managers are rightly concerned about the effect of pay cuts on motivation, morale and hence productivity.

15 See Figure 3 in Dickens & et al. (2006). The countries investigated were Ireland, Denmark, France, Belgium, UK, Switzerland, Austria, Germany, Italy, Netherlands, Finland, Norway, Greece, Sweden, US, and Portugal. The list ranks them according to increasing nominal wage rigidity. Norway was not part of the study. The data covered different time periods for different countries.
mostly in the years 1980–2000. For Sweden the years 1995–2003 were covered. Thus, the Swedish bargaining reforms starting in the late 1990s may not be fully reflected in the results.

16 We do not want to paint an all black picture, and other studies on wage flexibility yield more nuanced results on Finland and Sweden. Holden and Wulfsberg (2007) compare the distributions of average wage changes over sectors in particular countries and particular years. Their research strategy is based on the dynamics of average wages in a large number of industries and a large number of countries. It thus provides another statistical look at wage rigidity/flexibility. For example, an important channel of wage flexibility may work through new recruits and job changes, something that may not be captured by the analysis of individual job stayers. Interestingly, the Nordic countries do not stand out as particularly rigid in this analysis. In the light of Finnish experiences, this discrepancy between the International Wage Flexibility Project and the Holden–Wulfsberg results makes some sense. Finland experienced a dramatic structural transformation from the mid-1990s onwards, with high productivity growth and big flows of individuals between firms and establishments. Thus, although pay cuts of incumbents were not frequent, average wage costs in industry exhibited a fair amount of flexibility.
There are three ways to deal with the impending fiscal imbalances that we forecast to be so significant due to demographic changes. We can raise tax rates. We can broaden the tax base by encouraging higher employment. And we can revisit the scope and organization of government provided services. The third option is the subject of this chapter.

Table 8.1 shows the 2005 breakdown of government expenditures by function for Denmark, Finland, Sweden, EU15 and the U.S. The Nordic countries have public sectors that all exceed 50 per cent of GDP, which is larger than the EU average and much larger than the U.S. The main deviation does not come from the basic “nightwatch” services (defense, public security, fire, emergency, government offices, etc), but rather from a larger welfare state. Expenditures on education are somewhat higher than in the EU, but the biggest difference comes from the extent of social protections. Further analysis reveals that transfers and especially public services are big.

It is evident that adjusting the scope and increasing the efficiency of public services can play an important part in avoiding future fiscal shortfalls.

The public sector has of course adjusted to changed circumstances all along, usually in response to fiscal constraints and the macroeconomic environment. The big sell-off of government
owned corporate assets throughout the EU in the 1980s and 1990s was largely triggered by the need to cover fiscal deficits. On the other hand, privatization has continued in the Nordic countries even in times of fiscal surpluses, indicating that economic efficiency has become an important objective as well.

It is estimated that the private sector’s share of government financed services in the EU has increased by 30 per cent over the past ten years. We have seen increased reliance on outsourcing and the birth of new hybrid forms of organization, such as the Public and Private Partnerships (PPPs). The inspiration for these experiments has come from similar trends in the private sector.

We endorse the general direction of these developments. It is a good time to reconsider the boundary between the private and the public sector. Financial markets have developed enormously, which together with technological advances, especially in the information and communication sectors, has led to new, successful business models, which the public sector should try to emulate and exploit. Exposing selected parts of the public sector to competition can have big efficiency payoffs.

Opinions about public versus private sector services become easily polarized. At one end is the liberal view that, with appropriately defined property rights, one should be able to privatize all but

Table 8.1
Government expenditure by function, 2005

<table>
<thead>
<tr>
<th></th>
<th>EU15</th>
<th>Denmark</th>
<th>Finland</th>
<th>Sweden</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>47.2</td>
<td>53.1</td>
<td>50.5</td>
<td>56.4</td>
<td>34.2</td>
</tr>
<tr>
<td>Nightwatch state*</td>
<td>10.0</td>
<td>9.3</td>
<td>9.9</td>
<td>10.7</td>
<td>10.8</td>
</tr>
<tr>
<td>Welfare state, of which</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Health</td>
<td>6.6</td>
<td>6.9</td>
<td>6.8</td>
<td>7.0</td>
<td>7.8</td>
</tr>
<tr>
<td>- Education</td>
<td>5.2</td>
<td>7.9</td>
<td>6.1</td>
<td>7.3</td>
<td>5.3</td>
</tr>
<tr>
<td>- Social protection</td>
<td>19.0</td>
<td>22.6</td>
<td>21.2</td>
<td>23.8</td>
<td>7.6</td>
</tr>
<tr>
<td>Other**</td>
<td>6.4</td>
<td>6.4</td>
<td>6.5</td>
<td>7.6</td>
<td>2.7</td>
</tr>
</tbody>
</table>

General government expenditure 2005 as a percentage of GDP.
* Defined as the sum of government spending on general public services, defence, and public order and safety.
** Defined as the sum of government spending on economic affairs, environmental protection, and housing and community amenities.

Sources: Eurostat and Bureau of Economic Analysis.
the most basic government infrastructure and leave efficiency to market forces alone. At the other end is the extreme public interest view stating that any service that serves the public at large should be provided by the public sector.

Our goal is to offer a balanced view based on insights from organizational economics as well as evidence on how a heavier reliance on private services have worked out in public sectors around the world.

The basic premise must be that privately supplied and publicly supplied services each have their comparative advantages. They shift over time, which is why boundary questions have to be revisited continuously. The great strength of the private sector is its single-minded pursuit of profits – a clearly defined, easily measured objective that is very effective in providing incentives for efficient production and innovation. But profit maximization can also become a liability in environments where it is too narrow an objective.¹

The public sector’s comparative advantages are just the opposite. It has the capacity to consider broader objectives than profit maximization, but the imprecise nature of its objectives, translated into missions for its agencies and bureaus, makes it a much more challenging organization to run. To coordinate and direct its work force to achieve objectives that are much fuzzier than profit maximization, the public sector is forced to employ a much heavier layer of bureaucracy than private organizations (which can be quite bureaucratic, too). Also, the government’s need for public legitimacy and trust calls for procedures and rules that are unnecessary in the private sector, thanks to competition.

Excessive bureaucracy and inertia are often seen as public sector diseases, but they appear more purposeful through the lens of organizational economics. Bureaucracy is a rational response to organizational problems that are more challenging for the public sector, because it operates without the performance feedback from competition and consumer choice.

The differences in performance between the private and the public sector are also exacerbated by the way tasks get allocated between the two. The public sector tends to be handed tasks that the private sector does poorly, namely tasks that are hard-to-meas-
ure. This selection bias alone will make public agencies appear operationally less efficient than private enterprises.

These observations should not be taken as excuses for all inefficiencies in the public sector. The purpose is to caution against the belief that the public sector could be made internally more efficient simply by using stronger performance incentives and less bureaucracy. The ability to commit to weak performance incentives is often essential for handling some of the tasks that the public sector is charged with.

The upshot is that the public sector is an expensive form of organization (measured by cost) and should be used only where its unique qualities – the ability to serve broader social goals – are especially valued. Consequently, the best route towards higher productivity of public services will much of the time come from leveraging the private sector using outsourcing, Private-Public-Partnerships (PPPs) and other hybrid forms of organization that exploit the benefits of competition without losing sight of the broader mission that is the rationale of having public services in the first place.

Finding the right hybrids is not easy and will require trial and error – and patience. The discussion of the Danish Flexicurity model in Chapter 6 illustrates the point. It took a long time before the missing piece was found that made Flexicurity effective in reducing unemployment. Experimentation is a challenge for the government, because it does not have the competitive urge to innovate. In the public sector errors tend to get punished, while successes are less noticed. Understandably, there is also a lot of resistance within the public sector to reforms. To break these barriers requires political action and administrative initiative at the highest levels.

8.1 THE VIRTUES OF COMPETITION

It is useful to start by reviewing the virtues of competitive markets and the circumstances in which profit maximization leads to desirable social outcomes. Publicly provided services need to be considered only when competition does not work well.
Consider a single service, say, a cup of coffee. Suppose there are several coffee shops right next to each other, all offering an identical cup of coffee. Consumers know that the coffee is identical so unless the coffee shops collude, they will all end up charging the same price in equilibrium. In what sense does this outcome maximize social welfare? The precise answer is this: When supply equals demand, the price is such that all mutually advantageous trades are carried out and no others. The reason is simple. Everyone who decides to buy coffee must value it higher than the going price while everyone who decides not to buy coffee must value it lower. Therefore, when supply equals demand, there is no alternative allocation of coffee and money that makes all the customers as well as the shop owners better off. (Economists call this state Pareto optimal).

The magic of competition is that the customers’ welfare will be taken care of by profit maximizing shop owners, merely because customers can walk out – or exit in Albert O. Hirschman’s famous language – if they are dissatisfied with the price that a coffee shop offers. Voluntary trade paired with competition will provide enough information about customer preferences to allocate services efficiently.

The efficiency of a competitive equilibrium holds much more generally. Shops could invest in capacity or, when customers have different preferences, choose what types of services to offer. As they maximize profits, shop owners will optimally trade off the benefits and costs of customers, too. They will also seek the best way to organize the coffee shop: the number of workers to employ, the training they have, the hours they work, how much to pay them and what fringe benefits to provide them. Loosely speaking, as long as all direct stakeholders – the customers, workers and suppliers – have competitive alternatives to choose from, the resulting market outcome will maximize social welfare in the Pareto sense describe above. Shop owners will receive a market determined return on their time and investment, but not more, while the stakeholders will be at least as well off as they would with their best alternatives.

Competition and Pareto optimality do not guarantee any particular distribution of income or utility. All it guarantees is
that everyone gets their worth as measured by the value that the market puts on their contributions. Distributional issues have to be dealt with through taxation, social security and other government policies and, of course, through informal arrangements within families and communities.

Distributional concerns underlie many public services, such as schooling and public health. A big reason why the public sectors in the Nordic countries are so large has to do with the perceived need for collective risk sharing, as we discussed earlier. The question that we will address here, however, is whether some of the services could be offered more cheaply through the private sector, even when the public sector finances them (partly or fully). This leads us to consider reasons for having publicly produced, not just publicly financed services.

### 8.2 External Effects and Private Organization

In assessing the efficiency of coffee service, we only considered the value created for the shop owners and their customers. This is fine as long as the coffee business does not harm or benefit anyone else. If the coffee shops disturb the neighborhood at night, or if they bring more shoppers to the neighborhood during the day, profit maximization will not take into account all social benefits and costs. There would be external effects, or externalities.

In economic textbooks, externalities are always paired with government intervention of some kind. It could involve corrective taxes as in the case of congestion, or new property rights such as tradable “pollution rights,” that force the firms to bear the external costs and benefits that they cause. Other externalities can rationalize publicly provided services, as we will discuss shortly. But it is important to note first that firms can “internalize” many externalities on their own, without the need of government. Indeed, the very existence of firms and the determination of the lines of business that they pursue are in large part driven by the value of internal coordination of activities that decentralized market trades would
handle poorly because of externalities. Firms greatly extend the scope of market efficiency, because they can do what the markets cannot. Thus, the division of labor between public agencies and private firms comes down to which types of externalities firms can handle better than the government.

To give a concrete illustration of how firms internalize externalities, consider the organization of shopping malls. A shopping mall is typically owned and operated by a separate firm. The firm’s objective is to bring under the same roof a constellation of shops that make the mall as attractive as possible to buyers as well as shop owners. The firm considers carefully the contribution each shop can make to the overall value of the mall. Rental rates will reflect not just the size and location of a store, but also its ability to draw customers, which benefit everyone. The mall owners also put a lot of thought into the lease contracts, spelling out operating rules and constraints (such as store hours) that are designed to maximize the aggregate surplus for everyone setting up shop in the mall. If the shops were not coordinated in this fashion, but instead set up along a street like the coffee shops discussed earlier, positive and negative externalities from proximity would not be priced and would lead to inefficiencies. The popularity and ubiquity of shopping malls show that there is plenty of money to be made by internalizing externalities from proximity.

Metaphorically speaking, firms are rather like shopping malls, assembling different types of activities within one organization. Subject to public laws and regulations, firms are free to set the rules of conduct, design employee incentives, define jobs, allocate authority, select businesses to pursue and strategies to employ. Firms are far from democratic – nor do they need to be. A profit maximizing firm will take into account stakeholder interests as long as they have good exit options. Exit options are the essence of competition and the crucial difference between privately and publicly supplied services.
8.3 The Case for Government Provided Services – Missions versus Profit Maximization

So, why do we need government services? Because the government has one thing profit maximizing firms do not have: the ability not to maximize profits and instead consider broader social objectives. Firms will not internalize externalities that they cannot profit from. In such cases, it can be more efficient both for private firms and for society to let the government deal with the externalities. We turn to some illustrative contexts where publicly provided services often are used.

Public goods (or bads). National defense is a classic public good. Citizens want a strong national defense, but when asked individually to contribute to defense they would have little incentive to do so. The problem is that every euro spent to protect one citizen protects everyone. Private financing of defense suffers from a massive free-rider problem – a large scale externality.

The same holds true for many of the basic services needed in a functioning nation. The court system, the administration of political offices, the collection of taxes, the police, the fire department, all are public goods that are best put in the hands of the government. It need not be the central government. When the externality does not extend beyond a particular jurisdiction, it can be dealt with by the local government. Zoning rights for a city are best handled by the city government, which has the local knowledge and, thanks to recurring elections, the incentive to further the interests of its citizens.

Note that the zoning problem shares many of the features of the shopping mall: there are external effects, positive and negative, and a heterogeneous clientele that needs to be satisfied. So, why not have a private firm handle zoning? Because there is one crucial element missing: the citizens do not have good exit rights. Property owners would be captive to a private zoning office, which as a monopoly could extract much of their surplus. Real estate is an area prone to corruption precisely for this reason.
Asymmetric information causes contractual externalities, which competitive markets often have problems with. A case in point is the market for health insurance, which suffers from an adverse selection problem. Adverse selection occurs when people know their own health risks better than the insurance company and purchase insurance based on their private information. Insurance companies would like to know the health risks, too, but they may have to infer the risks (imperfectly) from individual purchasing behavior. Those who want to buy comprehensive coverage are suspected to have relatively poor health, forcing the price for comprehensive insurance higher than it would be if insurance were mandatory. As the price of comprehensive coverage rises, even less healthy will drop out of the pool. The process may not end until everyone, except the very sick, have been discouraged to buy comprehensive insurance. In that case a competitive market will be unable to provide full insurance. For this reason, mandatory health insurance is widely regarded as desirable. Even the U.S. is on the verge of adopting general health insurance, though the public sector will play a lesser role in the U.S. system.

Public oversight. Market efficiency rests on the assumption that consumers can make informed decisions. In some cases information can be more cheaply acquired by an agency than by each individual separately. The safety of products is a case in point. Firms may be able to certify their products using a private agency, but given the firms’ bias towards profit, people may not trust their choice of agency. The credibility of the government often beats the credibility of a private agency. The safety of medicines, toys and vehicles are illustrative. When consumers can rely on minimum standards assured by government, their monitoring costs can be significantly reduced.

More complex issues arise when services are provided to people incapable of making decisions. Nursery homes are a topical example. Family members and friends can act as trustees, but they are not always perfect substitutes for the real consumer: the person in need of the nursing home. Government provided or subsidized nursing homes are a possible solution.

Poor quality. Nursing homes, health care and primary schools bring up another potential advantage of public service supply. Profit
maximizing firms tend to focus excessively on reducing cost at the expense of quality and other hard-to-measure consumer benefits. Teaching elementary school students, for instance, entails much more than reading and writing. The school is supposed to impart social skills as well. Motivating teachers through high-powered performance incentives can be counter-productive, if it emphasizes what can be measured rather than the overall value of what is taught. Low-powered performance incentives enhance the self-motivation and sense of duty of teachers.

Of course, concerns for reputation may reduce quality shading and bridge the gap between narrow incentives and broader goals. Problems arise, when consumer feedback is slow or non-existent. Apparently this was an important rationale for letting a government agency take responsibility for all airport security in the U.S. after 9/11. When incentives for cost-saving and responsiveness to consumer (passenger) complaints are weak, as they tend to be in government agencies, the attention to safety is likely to be higher, particularly when complemented with procedural governance.

The common feature in all the examples above is that profit maximization is misaligned with social value maximization, because profit maximization does not consider all the external effects. In such instances, public service provision is potentially better than private provision. But there is no guarantee that the public sector will do a better job, because it faces its own set of challenges. We turn to these next.

### 8.4 The Costs of Bureaucracy

Not many good things are said about bureaucracy. The very word “bureaucracy” has a negative connotation, conjuring up images of slow and unresponsive public offices, wading in red-tape and lacking initiative.

There are two reasons why the public sector is so bureaucratic.

The first reason relates to a problem that has been addressed by many great political scholars: A government that is powerful enough to protect the rights of its citizens is also powerful enough to
The government has exceptional rights and powers – and the citizen has few options to exit. Because government has exceptional rights it has to be exceptionally careful not to abuse these rights. Trust and credibility are invaluable for the government. Without rules and constraints government officials could cause unspeakable damage to credibility. A firm, conscious of its reputation, encounters similar problems, more so the larger the firm is. This is one reason large firms become more bureaucratic. Yet, there is a big difference between the government and firms: Citizens have few options to exit, while the power of firms is held in check by voluntary trade. As a result, firms are much freer to use subjective judgment and exercise its powers and authority in a discretionary manner. The government has to fetter the hands of its bureaus and agencies to a much larger extent, because of concerns for legitimacy.

The first problem is compounded by a second problem: the fact that the public sector tends to get assigned tasks which the competitive market has difficulties handling. When profit maximization is misaligned with social welfare maximization, it usually means that performance measures reflecting the full social value of a service are missing. The government, when it takes over such services, will therefore have to deal with a much fuzzier set of objectives and poorer accountability. Government agencies are hard to govern, because they are guided by missions, the success of which is difficult to measure.

There are two responses to lack of good performance measures. One is to use weak incentives and rely on employees’ intrinsic motivations as just discussed. Relying on intrinsic motivation is not enough, however, because private motivations do not necessarily align with the public interest in every dimension. Passionate teachers are usually not passionate about saving costs. The second response is to use bureaucratic procedures to guide behavior. Line-item budgets for public agencies are a manifestation of this principle. It may seem bizarre that an agency cannot spend excess funds in one account, say office supplies, for something useful like buying better teaching equipment. Line-item budgeting appears very wasteful since it foregoes opportunities to improve a service. But in an environment where it is very difficult to judge how much money is needed for various activities, making funds less fungible and using incremental budgeting procedures (rather
than zero based budgeting) are imperfect ways of acquiring such information over time.

Consumers of a public service often have no other choice, either because no private service is available (as in the case of primary education in Finland) or because private services are expensive (as in the case of private health care). The alternative is to use voice when one is dissatisfied. But complaints often get a tepid response. There is a rational reason for this, too. Unlike exit, where one has to give up something, voice is cheap and prone to be overused, especially when the service is free. Red-tape limits excessive use of voice. It reduces illegitimate claims, but unfortunately also legitimate claims. As a result, public agencies have a harder time responding to consumer needs and react to new concerns as well as opportunities.

We have spent time on the problems of public bureaucracy because it is essential to understand the reasons why the public sector operates under very different incentives than the private sector. Any reforms of the public sector, including increased reliance on private sector services, will have to take into consideration the special nature of public sector accountability. Those who think one can readily make the internal workings of the public sector more efficient by strengthening employee incentives, giving them more authority and slashing bureaucracy, are likely to be disappointed with the results. One can certainly do better, but the fact that public bureaucracy is driven by missions and a deep concern for public legitimacy, without direct parallels in the private sector, suggests that a different approach is needed and that the gains will be more limited.

To illustrate this point, consider the use of information technology. As reported in chapter 3, IT has been the main driver behind the large increases in private sector productivity over the past fifteen years, especially in the U.S. and the Nordic countries. Even the service sector, which traditionally has experienced slow productivity growth, has been enjoying a remarkable resurgence. New business models have created highly efficient chains like Wal-Mart, which today employs close to two million workers globally. Controlling the logistics and the labour force in a firm of this size would be unthinkable without IT.
With this kind of productivity growth in the private sector, the prospects for similar gains in the public sector would seem good. However, investments in IT alone are far from enough. IT is merely a technological enabler. To improve productivity, firms have to make complementary investments in human capital and changed work practices of the order of three to five times the investments in IT.\textsuperscript{12} What is especially troublesome from the public sector’s perspective is that the changes in work practices that are essential include higher work autonomy and more powerful financial incentives (usually for teams of workers). Given the problems of accountability in the public sector and the bureaucracy built to deal with them, it is going to be hard to change the whole system. Yet, if these complementary investments are not made, the evidence from the private sector shows that returns from IT investments are often minimal, even negative.\textsuperscript{13}

\section*{8.5 The Future of Public Services – Leveraging the Private Sector}

Because of the inevitable burdens of public bureaucracy, the best way to raise public sector productivity is often to look for ways to “leverage” the private sector without compromising the government’s broader social objectives. This means increasing the reliance on privately supplied services, while keeping “core activities” under government control. The strategy is similar to outsourcing within the private sector and some of the lessons learned there can be useful. But as always, one should be careful about imitating private business models without checking how well their logic fits the public context. The core activities of the public sector are obviously very different from those in the private sector.

Many OECD countries, including the Nordic countries, are already relying heavily on the private sector for part of government financed services. Figure 8.1 shows the central governments’ purchases of all goods and services from outside vendors as a proportion of total expenditures, excluding transfers and interest payments. The Nordic countries, with their large government
sectors, place at or above the median of the sample, which reveals considerable variation across countries. Unfortunately, the figure does not include local government expenditures. The role of private sector services has grown especially fast in local government where budget pressures have been most acute.

The purpose of engaging the private sector is to bring in more competition. The hoped for benefits from competition include better allocation of resources, lower cost of service, higher quality of service, more innovation and new business models – in short, all the virtues of competition we discussed earlier. However, these benefits will necessarily be limited by the government’s need to retain control so that its broader missions can be achieved and its legitimacy preserved. Many bureaucratic rules will continue to apply in the relationship between the private sector and the government. For instance, while a firm is free to choose whichever private service provider it wants based on whatever criteria it chooses, including very subjective ones, the government has to rely on transparent,

There are a lot of potential benefits from competition, but these will be limited by the government’s need to retain control of its broader mission.

---

**Figure 8.1**

Outsourcing of government services, 2001

Purchase of goods and services vs. in-house provision.

Source: OECD Secretariat calculations based on GFS Data.
objective, egalitarian criteria when it selects suppliers. Equal access to services is often imposed as well. This means that the cost of government services will be higher than in the private sector even when the government employs private vendors.14

There are four main ways in which the government can use the private sector: (a) Outsourcing, (b) Private-Public Partnerships (PPPs), (c) Privatization (with regulation) and (d) Vouchers. The categories overlap somewhat. For instance, PPPs are a variant of outsourcing and may simply be classified as such. The order in the classification above reflects roughly decreasing government control. In outsourcing the government retains the most control, while privatization and voucher systems give private enterprises significantly more freedom.

We will not take up regulation here. It is a large subject in its own right and leads to somewhat different considerations, since it usually deals with monopoly problems. Instead, we want to make some observations about the three other forms of private sector engagement, where the idea is to make use of competition.

a. Outsourcing

In outsourcing, one or more service suppliers are selected through competitive bidding, which is repeated when the contract comes to an end. Bidding is essential, because of the special demands for government accountability. For the same reason, the bid price is almost exclusively used to choose the winner – concerns about service quality and other requirements have to be dealt with through detailed contract terms. Subjective information regarding vendor performance cannot be used much, which reduces the vendor’s incentive to invest in reputation and further increases the need for explicit requirements. Contract terms often spell out not just what should be produced, but also how it should be produced. The bureaucratic hand of government is very much present even when a service is outsourced.

Outsourcing has been the fastest growing category for government spending on private goods and services. A very rough estimate of the size of central government outsourcing can be obtained by reducing the numbers in figure 8.1, by 10–15 percentage points. Outsourcing is clearly the largest private expenditure category.
The demands for objectivity limit what the government can efficiently outsource. Yet, all sorts of outsourcing services have been tried by now. It is useful to distinguish between two sub-categories: (i) Maintenance and administrative services that do not directly involve consumers, ranging from cleaning and security to IT administration and other back-office support; (ii) Consumer services, ranging from garbage collection to complex services such as health and elderly care. Apart from protests by affected workers, the maintenance and administrative services raise few controversies, because they are non-core government activities. Outsourcing of consumer services faces harder trade-offs, because this is where private and public interests will conflict.

The collective evidence, which by now is extensive, indicates that outsourcing leads to significant efficiency gains on average. The estimates in individual studies vary widely, depending on how narrow the studies are and also on the biases of those reporting. The clearest and most significant evidence concerns cost savings. In a study of over 2000 outsourcing initiatives in the U.S., the average cost savings were above 30 per cent; UK and Australian studies show cost savings in the 15–20 per cent range; Sweden’s highway agency saw procurement costs drop by 25 per cent thanks to competitive bidding; in Finland outsourcing of the public transportation system in Helsinki saved around 30 per cent. It is likely that these estimates overstate the savings, because the studies rarely include the transition and transactions costs associated with outsourcing. On the other hand, few if any studies appear to consider the increased efficiency of government services that remain in-house but feel the competitive pressures of the private sector indirectly. Irrespective of the balance between the omitted benefits and costs, it is clear that the overall cost savings from outsourcing have been large.

Weakening of quality, which is a potential concern with private services, has been less of a problem than one might have expected. The general experience is that the quality of service stays the same or improves under outsourcing. Nevertheless, there have also been major problems. In the U.S. sub-standard service at nursing homes has made headlines. Recently, The New York Times conducted a major study that showed that when private equity owners merged
small nursing homes into large chains, profits went up at the expense of much lower service. On virtually all indicators of service, the chains performed below the national average and in some cases were in gross violation of legal standards.

Health care services seem to be less prone to quality shading. In a large study of British emergency hospitals strong performance incentives caused dramatic improvements in waiting times without any noticeable adverse effects on treatment. In Finland, local governments have rapidly outsourced ambulatory physician services to private companies. The private firms can take advantage of economies of scale by servicing large areas covering many local governments. So far, both cost and quality have improved at MedOne, the largest of the private suppliers, with throughput per euro increasing an estimated 20 per cent and patient as well as worker satisfaction ratings up.

What lessons can be drawn from the outsourcing experiences to date?

The biggest lesson is that competition is the key to improved performance. It does not necessarily matter whether the bidding for a service is won by a private firm or a public agency. This was the finding in a study of outsourced garbage collection, where both private and public sector vendors got contracts. A vendor that has a captive client is not going to be efficiently run. A vendor facing competition will be pressed to lower prices and mostly to higher quality as well.

In evaluating the evidence on quality, it has to be kept in mind that the choice of outsourced services is not random. The choices have been made considering the potential for the net benefits. Initially, non-core services and the more mundane core services were outsourced. As the outsourcing movement has gathered pace and expanded deeper into the core activities of the government – public security, emergency services, schools, even prisons and military combat – the experiences have tended to become more variable.

A second lesson, not illustrated by this quick review, but evident in the many case accounts, is that every outsourcing case has unique features requiring great attention to detail. For instance, the length of the service contract involves trade-offs that need to be...
assessed case by case. The importance of design details is corroborated by experience from incentive designs both in the private and the public sector. It is impossible to foresee all future contingencies and the many ways in which creative, profit driven parties can exploit omissions and mistakes in contracts. Moreover, there is a fundamental imbalance between the weak financial incentives of government agents and the strong financial incentives of private firms, which is always going to warrant consideration.

The third lesson is that outsourcing does require clearly defined goals and carefully chosen performance measures. Investments in better auditing systems, especially by independent parties, can have high payoffs. It is conceivable that accounting practices within some sectors of government could be changed to serve the specific requirements of outsourcing and other kinds of private sector engagements. With better performance measures one can rely less on how a service is carried out and more on what the results are. This will increase the autonomy and initiative of the service provider.

b. Public and Private sector Partnerships

Public and Private sector Partnerships (PPPs) are a more recent phenomenon. They got started in earnest after Prime Minister John Major’s Public Finance Initiative in the U.K. in 1992. The PPP label may suggest a variety of jointly arranged services between the government and the private sector, but the label refers to a particular variant of outsourcing. PPPs are governance structures where a consortium of private investors sets up a company to finance, plan, build, maintain and operate a piece of infrastructure such as a hospital, a school, an airport, a highway, or a railroad. The company does not deal with the patients in the hospital or teach the students in the school. The sole purpose is to handle the infrastructure. The hope is that by putting all the stages of a big infrastructure project under the responsibility of the same entity, better incentives are created for coordinating the various stages of the project and undertaking each in a way that takes into account both short and long-run effects. Also, by moving the financial responsibility of the project to private investors, the thought is that risk will be carried by the parties that are in the best position to monitor and manage those risks.
PPPs have received disproportionate attention in the press. They are not that widely used yet. Even in the U.K., which has the most extensive experience, PPPs only count for 10 per cent of government spending on outside services. PPPs are not meant for small or ongoing services that are regularly put up for bid. They are tailored for large scale projects that have a long duration – typically around 20 years – with assets expected to be turned back to the government at the end of the term. Because they are one-off projects, even more thought has to go into performance clauses and rules for termination.

Some of the projects have fared badly and caused public uproar. The privatization of the U.K. railway infrastructure assets is the most noted failure. In 1994, an investor owned company, Railtrack, took control of all government owned railway infrastructure assets in the U.K. In 2002 after a tormented relationship with the government and the public, Railtrack was forced into liquidation. A string of accidents, some fatal, appeared to be the result of insufficient investments in maintenance at the same time as generous dividend payments were made to the shareholders; a prime example of quality shading.

Interestingly, the assets were subsequently sold to another private company, Network Rail Infrastructure, a “not for dividend” company similar to a mutual company. It is run expressly in the interest of its stakeholders: the government, the regional railroad operators, and the communities that it serves. The structure is complicated, but the new entity is enjoying a much higher credibility with the public and better operating performance.

There are also many successful PPP implementations. In Denmark, the community Solröd used a PPP structure to build a string of new schools (financed by public money, presumably because of uncertainty about revenues). The Norwegian government has employed PPPs for large highway projects, using tolls and rental payments from the government as a stable income stream. Success again seems to rest on careful planning to ensure cooperation between the public and private parties including arbitration schemes to prevent problems from getting out of hands. Failure versus success seems to hinge critically on having realistic expectations and foreseeing potential trouble spots in advance. This may explain why PPPs have not been employed more extensively.
c. Vouchers

Vouchers are issued by a central or a local government to consumers so that they can pay for a service that the government wants to subsidize. A voucher is a generic term that covers all types of subsidies channeled directly or indirectly through the consumer. Vouchers are always issued for a specific purpose. They are non-tradable and may be means-tested or cover only part of the service cost.

The purpose of vouchers is to give consumers a choice among various service options, that is, free them from being captive by giving them an exit option. Vouchers combine a concern for equity with the allocational and productive efficiencies that come from letting consumers express their own preferences and having service providers compete for their business. For some services it makes less sense to let consumers choose, because they are in a poor position to judge which service provider is best. For instance, in garbage collection or local transportation it may be efficient to have one service supplier, in which case having the government ensure competition by putting the service up for bid makes more sense.

Vouchers are extensively used in the OECD to subsidize consumer driven services like health care, child care, elderly care and schooling. In the Nordic countries, vouchers play a smaller role, because so many services are government supplied. The health care sector is probably the heaviest user of vouchers, though people do not recognize the subsidies under that name. The Nordic health care systems are a complicated mix of public and private supply with physicians often working for both sectors. In Finland, basic health services are essentially free, but private services are also heavily subsidized. Screening via differentiated subsidies is also practiced by private health insurers, for instance in the U.S. It can be rationalized as an efficient way to regulate the consumption of services and to steer people towards cheaper services where appropriate. Those who want more or better health services have to prove it through a higher co-payment.

Vouchers are also used in the care for the elderly, but not in a major way. The fraction of private nursing homes in Finland is the lowest within OECD. The rest of the Nordics are also at the
Vouchers are allowed to be used for expenses incurred by a family that cares for its own and for private attendants. Both are laudable options, because they give consumers a choice.

We do not have statistics for child care, but anecdotal evidence suggests that the same pattern prevails. Private childcare is available, but since the 1970s the public sector (mainly through local governments) has established a very dominant position. This might be efficient if there were concerns about quality or if parents could not be trusted to choose proper care. Since there seems to be little evidence that this is the case, childcare but also elderly care are areas in which there is scope for substantially increased private sector involvement.

Economists like vouchers, because they have good efficiency properties both in terms of determining individual levels of service consumption as well as the allocation of services across providers. For the same reason, they like fees for publicly provided services. A service that is free will be over-consumed or be inefficiently paid through rationing and queues. However, the public is much more accepting of co-payments for private services than they are of fees for publicly provided services. There may be a presumption that private services can cost money, but public services should be free, because they have already been paid for through taxes. A more sinister interpretation is that low fees foster higher use of public services at the expense of private services. The benevolent interpretation is that some services should be available for everybody at no cost, because it is equitable – service provision is part of the collective insurance system. This is a defensible position if one is careful about which services deserve such heavy subsidies. Health care and primary schooling are good candidates, because they are essential for all. But providing higher education for free seems like a very costly, even unfair subsidy, in a case where consumers clearly have very different preferences. A public good argument also works much better for primary than tertiary schooling.

Our intention is not to argue strongly for or against fees for particular services. Our point is simply that low or no fees for public services, in an economy where half of GDP is spent on the public sector are unlikely to be optimal or easy to defend on equity grounds. This is an issue that should not be shunned or treated
mechanically in the political debate over the proper scope of government. The Nordic countries will almost surely have to restructure parts of their social safety net to make room for expected increases in expenditures induced by changed demographics. In preparation for this, it is good to begin to review the fee structure for public services already now.

8.6 Conclusion

In this chapter we have provided an economic framework for thinking about the proper scope of government that should help in assessing some of the main trade-offs involved in deciding what the public sector should be involved in and how it should adjust to changed circumstances. The chapter is short on specific advice, partly because decisions are complicated and require more detailed analysis and partly because they involve value judgments. But there are some important messages nevertheless.

- The public sectors in the Nordic countries are large because of the high share of publicly provided services and the extensive use of transfer schemes. Increasing the efficiency of public services is an essential element in alleviating expected future fiscal pressures.
- Efficiency gains can be obtained by streamlining internal work processes, changing organizational structures, making better use of new technologies and retraining public servants. But there are limits to how much can be achieved this way, because public bureaucracy is to a large extent purposeful rather than the result of poor design, inattention or indifference. Trying to emulate the strong incentives for initiative and innovation that characterize vibrant competitive markets would not only be impossible, but also misguided. Low-powered incentives fit the particular tasks that the public sector should handle – activities where the pursuit of profit is sufficiently misaligned with the pursuit of social welfare (including important equity goals).
Because the public sector is charged to deal with diffuse and difficult tasks, it is expensive. Where possible, the public sector should exploit the allocational and productive efficiencies inherent in private organizations. Given the size of the Nordic public sector services, this is where the greatest opportunities for raising the productivity of the public sector lies.

The experiences from outsourcing, privatization, the use of vouchers and various other forms of public and private sector cooperation have been mostly positive. Significant cost savings with the same level or higher service quality have been achieved. The most important driver of value is the introduction of competition, because it gives consumers and procurement officers new choices.

The Nordic countries do not appear to benefit less or more from outsourcing public services than other countries. One might have speculated that the high quality of the public labor force in the Nordic countries would be especially well suited for outsourcing, resulting in higher returns than elsewhere. Or one might have thought that the quality of public services is already so high that outsourcing gains would be small. The empirical evidence does not seem to show any consistent patterns one way or the other, though the evidence we have seen is very limited.
ENDNOTES

1 The private sector includes of course non-profit maximizing enterprises such as cooperatives and not-for-profits, but the bulk of private sector activity occurs within profit maximizing enterprises. See Holmstrom (1999) for more on this perspective on the firm.

2 In the modern theory of the firm, the main reason why a division within a firm may be spun out into a separate firm is that as an independent firm, the division will have stronger incentives to pursue profit. The cost is that this will forego from coordination, because the independent division will have a narrower objective. See Hart (1995).

3 See Rotschild and Stiglitz (1976).


5 There is evidence showing that U.S. primary school teachers that are rewarded based on how their students perform on standardized tests, tend to bias their teaching and some of them will even resort to cheating. See Prendergast (2003).

6 Tirole (1994) emphasis and provides further discussion on the role of missions. See also Dixit (1996) on low-powered incentives in bureaucracies. See also Prendergast (2003).

7 Wal-Mart’s share of the U.S. retail sector’s productivity gains, directly and indirectly, has been estimated to be around 25 per cent. See Brynjolfsson and Hitt (2000).

8 Finland has just embarked on an ambitious and important initiative to reform its higher education system. Universities will become free-standing foundations rather than government bureaus. Each will have an outside board of trustees that will guarantee university presidents and their administrations much more autonomy to raise and spend funds. Many governance details remain to be decided. One of the most important ones is to introduce a new strong evaluation system, which will provide reliable, independent information about the quality of research and teaching. The U.K. introduced such a system some years back and it has had a strong effect on the allocation of government funds across universities as well as fields and spurred healthy competition that had been missing. This example illustrates that with decisive action on the highest political and administrative levels, the government can reorganize itself also internally by strengthening incentives and reducing bureaucracy. However, the government’s benefits from moving a service to a private provider may be higher or lower depending on circumstances. It is surprising that few comparisons between private and public sector savings from outsourcing have been done. See OECD (2005), Sjöström et al. (2006) and Jensen and Stonecash (2005) for more details on the evidence.

9 Interview with Anssi Soila, director of MedOne.

10 See OECD (2005), Sjöström et al. (2006) and Jensen and Stonecash (2005) for more details on the evidence.
The purpose of this report is not to praise the Nordic model, even though we find that it has important strengths and has performed reasonably well. Nor is the purpose to preach doom and gloom unless a specific set of policy recommendations is implemented. The ambition is more modest but no less useful:

- to identify and explain the nature of some main challenges faced by the Nordic countries (along with other countries) and to shed light on the trade-offs involved;
- to explain why many of the “solutions” suggested in public debate are based on erroneous reasoning or are unrealistic; and
- to indicate directions or areas in which new thinking and policy reforms are called for in the Nordic countries, and notably in Finland.

In other words, the report assesses the need and directions for reform so as to safeguard the key features of the Nordic model in the face of new challenges – notably those of the demographic transition. By the key features we refer to openness to globalization and risk sharing. Broadly stated, we believe that reform should build on the strengths of the model and focus on proposals that improve work incentives while maintaining the essential elements of collective risk sharing.
The biggest hurdle to overcome for policy reform is neither the lack of options for addressing the problems, nor some intrinsic fault of the Nordic model itself. The biggest difficulty is our complacency – understandable enough in the light of past successes. Economic developments have been favourable for many years. Also, the problems associated with ageing populations will materialize fully only after a time interval measured in decades rather than years. It is extremely difficult to engineer the political will for courageous actions that address problems which are not acute, but far in the future – and yet, one generation is a short time span for society and its welfare policies.

The virtue of the Nordic model is its ability to reconcile risks and uncertainties with openness and the market economy. This unique “third way” of the Nordics has two tracks: an open and well-functioning market economy, combined with a large public sector that has wide ranging responsibilities. However, globalization, a rapidly ageing population and the Nordic welfare state is a challenging triangle. What has worked well in the past, is unlikely to be good enough in the future.

There are at least three areas that call for new thinking and decisive reforms.

First, the changing demographics underline the need to reduce benefit dependency and raise employment rates:

- the young should start their working careers earlier; the average time spent in tertiary education is excessively long (e.g., tuition fees might be helpful);
- changes in labour demand require educational institutions to adjust and call for an enhanced role for employers in designing on-the-job training schemes; also, specific programmes and effective workfare elements can be used to prevent e.g. school dropouts and immigrants from becoming marginalized;
- pension and tax policies should encourage the elderly to prolong their working careers through weaker incentives for early retirement, by indexing the pension system to longevity, and by offering a more favourable treatment for the wage income of working pensioners;
there is a case for discarding arrangements that de facto subsidize leisure at the expense of work (such as the sabbatical leave in Finland);

- there is a need to match better the demand and supply of labour regionally and occupationally; labor mobility can be supported by more stringent limits on unemployment benefits (duration, workfare elements) and financial incentives to relocate;

- decentralized wage formation may improve matching and the functioning of the labour market in general as well as contribute to a better personnel policy (an area in which Finland could emulate “best practices” in Sweden and Denmark); and

- immigration policy should take into account the needs of the economy with the aim to achieve a high rate of labour market attachment of immigrants.

Second, the impending spending pressure calls for actions that define the core activities of the welfare state, set limits for what the government is responsible for and enhance the efficiency of public services:

- a ceiling on overall pension contributions (moving decisively towards a defined contribution system) could usefully be specified and measures enacted to ensure that pension costs allow the ceiling to be respected;

- the efficiency of public services can be enhanced by introducing competition via selective outsourcing of services and use of vouchers and customer fees.

- one should clarify the scope and need for complementary private solutions, so that citizens have a clear understanding of what they can expect in the areas of publicly provided health and old-age care.

Third, and this is an overarching principle, society should have high ambitions with regard to investment in human capital and skills of the young. Changing demographics will increasingly lead to conflicts of interest between the old and the young, for instance, when central and local budgets are decided. There is a risk that the many (the old) will outvote the few (the young), which could imply policies that do not cater for the future appropriately. Invest-
ment has a higher return when spent on the young. A society can remain healthy and vital only if it ensures that the young generation is well-educated and prepared to take on future challenges. This broad principle should guide policy choices in a number of areas:

- we should invest more in education, particularly at the university level (both education and research);
- social protection should pay due attention to the needs of families with children (safeguarding good quality day care facilities and parental leaves); and
- the relative tax burden of the young could be eased by shifting the tax structure from taxes on wage income towards consumption and real estate taxes (which is also in tune with the requirements of globalization).

The bottom line

Institutions should be reassessed, while some values underlying the Nordic model need to be reiterated. For instance, the rationale for legislative protection of employment is certainly much weaker in today’s era of comprehensive social security and unemployment benefits. Similarly, collective wage bargaining made sense when inflation rates were high and uncertain and macroeconomic policies lacked credibility, but we now live in a very different world.

The Nordic model will in coming years be facing the most stringent political test of its lifetime. It was established in favourable demographic circumstances. When the first welfare services were introduced and the first pension systems established, the reforms created many more winners than losers. The political mobilisation for the welfare state, in particular within the powerful Nordic labour movement, has accordingly been articulated as a win-win struggle for the “rights” of workers and all citizens. Such a political discourse continues to permeate today’s electoral debates, in which it is far easier for candidates to promise further entitlements than to remind the electorate of the dynamic budget constraints or of the looming demographic challenge.

Given the worrying demographic prospects, many of the reforms will create both winners and losers. Responsible politicians will have to understand and acknowledge that it is largely the same people who enjoy the benefits of entitlements and who finance
their increasing costs. There is no unused reserve of resources that can be tapped – nor is there some unexploited tax base that could generate significant financial leeway. The resources that are needed will have to be generated through productive activity; we cannot afford free-riders.

People have to work more – start their working careers earlier, work more hours on average, and retire later. The Nordic countries are not doomed to stagnation, financial deficits or rising tax rates. The Nordic model can be defended and upheld – but only through reforming its institutions and policies while reiterating its commitment to a proper balance between the entitlements and responsibilities of its citizens.
REFERENCES


